FLIGHT ATTENDANT DUTY TIME LIMITATIONS

(102-3)

HEARING

BEFORE THE

SUBCOMMITTEE ON AVIATION

OF THE

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION HOUSE OF REPRESENTATIVES

ONE HUNDRED SECOND CONGRESS

FIRST SESSION

ON

H.R. 14

TO AMEND THE FEDERAL AVIATION ACT OF 1958 TO PROVIDE FOR THE ESTABLISHMENT OF LIMITATIONS ON THE DUTY TIME FOR FLIGHT ATTENDANTS

MARCH 13, 1991

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Committee on Public Works and Transportation

Congress of the United States
House of Representatives
Room 2165, Rayburn House Office Building
Washington, DC 20515
TELEPHONE: AREA CODE 202, 226-4472

To: Members of the Subcommittee on Aviation

From: Committee's Aviation Staff

Re: SUMMARY OF SUBJECT MATTER for hearing on H.R. 14, LIMITATIONS ON FLIGHT ATTENDANT DUTY TIMES
Wednesday, March 13, 1991

This hearing is on H.R. 14, the Flight Attendant Duty Time Act. The bill is sponsored by Rep. Norman Y. Mineta, and cosponsored by Reps. Robert A. Roe, James L. Oberstar, John Paul Hammerschmidt and William F. Clinger, Jr.. The bill provides for the establishment of limitations on duty times for flight attendants. ("Duty time" is defined as all time worked for an air carrier, beginning when the flight attendant is required to report for assignment, up to release from that assignment by the carrier.)

The bill prescribes limitations for flight attendant duty time, requires the Secretary of Transportation to adopt regulations embodying these limitations, and sets deadlines for proposal and final promulgation of the DOT regulations.

A similar bill was introduced in the 101st Congress. Hearings were held by the Subcommittee on May 17, 1989.

NEED FOR LEGISLATION

Fatigue is a serious safety problem, and is recognized as such by the aviation industry. The Federal Aviation Administration has established limitations on the uninterrupted duty times of, and imposed minimum rest periods for, pilots, flight engineers, flight navigators, air traffic controllers, mechanics, and dispatchers.

No such limitations are provided for flight attendants, despite their important safety responsibilities aboard commercial aircraft.

Flight attendants must know the procedures to follow in the event of an emergency, such as operating ditching and evacuation equipment, first aid equipment, and fire extinguishers. They must be able to cope with rapid depressurization, cabin fires, evacuation of passengers, passenger illness or injury, skyjacking attempts and other unusual situations. Their more routine safety responsibilities extend from the pre-flight briefing to assuring that seats and trays are in an upright position for landing. Equally important, they must stay alert throughout the flight for any signs of an impending emergency in the cabin.

The matter of excessive duty hours is not hypothetical. FAA has advised the Committee of cases in which flight attendants have been required to work for as long as 24 consecutive hours, and given rest periods as short as 6 hours. In the accident involving Galaxy Airlines in Reno, Nevada in 1985, the National Transportation Safety Board investigation disclosed that at the time of the accident, two flight attendants had been on duty for over 18 hours and were scheduled to continue on duty for an additional 7 hours.

A survey conducted by FAA in response to Committee actions in the last Congress found wide variations in flight attendant duty times between carriers and segments of the industry, depending on union contracts, company work rules and guidelines.

The survey also found that 23 foreign countries regulated flight attendant duty times.

HISTORICAL BACKGROUND

In 1984 and 1985, respectively, the Association of Flight Attendant and the Joint Council of Flight Attendants Unions petitioned the FAA to establish maximum duty time limits and minimum hours of rest for flight attendants.

The FAA denied the petition on January 23, 1989, on grounds that such action would not be in the public interest.

H.R. 638, requiring FAA to establish duty time limits, and legislatively establishing "fall-back" limitations should FAA fail to do so, was subsequently introduced.

The Subcommittee on Aviation held a hearing on H.R. 638 on May 17, 1989. At that hearing, FAA announced its intention to conduct the above-mentioned study to determine whether federal regulations were justified. The study was completed in September, 1989. FAA concluded from that study that limitations should be set, wrote a proposed rule, and in July, 1990, sent it forward to the Department of Transportation, where it has languished ever since.

THE LEGISLATION

H.R. 14 requires FAA, within 240 days of enactment, to promulgate a rule establishing limitations on duty times for flight attendants, including minimum rest requirements for domestic, international, and long-range international nonstop flights. In these regulations, the maximum duty time must be 14 hours in domestic service and 20 hours for long-range international nonstop flights. The regulation must establish rest periods ranging from a minimum of 10 hours following domestic service to a minimum rest period equal to at least twice the scheduled flight time following a long-range international nonstop flight.

If the Secretary of Transportation has not begun rulemaking by the 60th day after enactment, or fails to issue final regulations within 240 days of enactment, H.R. 14 precludes airlines from flying an airplane with flight attendants who had been on duty for more hours, or who had fewer rest hours, than those specified in the bill. The Secretary could modify the above duty and rest periods in the interest of safety, after so advising the Committee and the Senate Committee on Commerce, Science and Transportation.

ISSUES

1) Are duty time limitations necessary? Flight attendants and H.R. 14 supporters will argue "yes" for safety as well as occupational health reasons. Others may argue that collective bargaining and informal company guidelines are sufficient.

2) Is this bill necessary, since FAA has already drafted and forwarded regulations to DOT? Bill supporters will argue that the study was completed in September, 1989; FAA spent until July, 1990, drafting the regulations; and DOT has held them, with no sign of movement, since that time. It is thus appropriate for the Committee to take further action.

3) The 14-hour limitation for domestic flights. A 14-hour duty period is consistent with many contracts and company rules. However, FAA assumed, for evaluative purposes, a 16-hour duty period in its survey of airlines. The periods contained in the draft regulations now before DOT are not public.

THE WITNESSES

- The Honorable Norman Y. Mineta, author of H.R. 14.

- FAA witness (probably Anthony J. Broderick, Associate Administrator for Regulation and Certification). The Department of Transportation has been invited to provide a witness as well.

- Representative of the National Transportation Safety Board.

- Flight Attendant Panel, including Cheryle A. Leon, President of the Association of Professional Flight Attendants, representing the Coalition of Flight Attendants, and one or more line flight attendants.

- Walter S. Coleman, Vice President, Operations, Air Transport Association; and Deborah C. McElroy, Vice President, Regional Airlines Association.

102D CONGRESS
1ST SESSION

H. R. 14

To amend the Federal Aviation Act of 1958 to provide for the establishment of limitations on the duty time for flight attendants.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 3, 1991

Mr. MINETA (for himself, Mr. OBERSTAR, Mr. CLINGER, Mr. HAMMERSCHMIDT, and Mr. ROE) introduced the following bill; which was referred to the Committee on Public Works and Transportation

---

A BILL

To amend the Federal Aviation Act of 1958 to provide for the establishment of limitations on the duty time for flight attendants.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Flight Attendant Duty Time Act".

SEC. 2. AMENDMENT TO THE FEDERAL AVIATION ACT.

(a) IN GENERAL.—Title VI of the Federal Aviation Act of 1958 (49 U.S.C. App. 1421–1433) is amended by adding at the end thereof the following new section:

"SEC. 614. DUTY TIME OF FLIGHT ATTENDANTS.

"(a) RULEMAKING PROCEEDING.—Not later than 60 days after the date of the enactment of this section, the Secretary shall initiate a rulemaking proceeding for the purpose of establishing limitations on duty time for flight attendants, including minimum rest requirements.

"(b) FINAL REGULATIONS.—Except in any case in which the prohibitions referred to in subsection (c) take effect, the Secretary shall issue, not later than 240 days after the date of the enactment of this Act, final regulations establishing limitations on duty time for flight attendants, including minimum rest requirements as follows:

"(1) For a domestic flight, a maximum of 14 hours of actual duty time and a minimum of at least 10 consecutive hours of rest after each duty period.

"(2) For an international flight, a maximum of 16 hours of actual duty time and minimum of at least 12 consecutive hours of rest after each duty period.

"(3) For a long-range international nonstop flight, a maximum period of actual duty time no more than 4 hours greater than the scheduled duty time, with a maximum period of actual duty time no greater than 20 hours, and a minimum consecutive rest period equal to at least twice the scheduled flight time.

"(4) For all flight attendants, a minimum of eight 24 consecutive hour periods of rest at their domicile

per calendar month and at least one 24 hour consecutive period of rest within every 7 days.

"(5) For all flight attendants, at least a continuous 1 hour rest break on any flight scheduled for 8 hours or more of flight time in a designated rest area.

"(c) MANDATED PROHIBITIONS.—If the Secretary does not initiate a rulemaking proceeding under subsection (a) before the 60th day following the date of the enactment of this Act or does not issue final regulations under subsection (b) before the 240th day following such date of enactment, no air carrier may after such date operate an aircraft using a flight attendant who has been on duty more hours, or who has had fewer hours of rest, than those required by paragraphs (1) through (5) of subsection (b).

"(d) MODIFICATION OF MANDATED PROHIBITIONS.—The Secretary may issue regulations modifying the prohibitions contained in paragraphs (1) through (5) of subsection (b) if the Secretary determines that such modifications are in the interest of safety and transmits a copy of the modifying regulations to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Public Works and Transportation of the House of Representatives. The modifying regulations may not take effect until the expiration of the 90-day period beginning on the date of the transmittal of the modifying regulations to such committees.

"(e) DEFINITIONS.—In this section, the following definitions apply:

"(1) AIR CARRIER.—The term 'air carrier' means any air carrier which is subject to the provisions of part 121 or part 135 of title 14 of the Code of Federal Regulations.

"(2) DEBRIEFING TIME.—The term 'debriefing time' means a time period of at least 30 minutes for domestic flight and of at least 45 minutes for international flight after the block-in time of the last flight or segment of a flight.

"(3) DESIGNATED REST AREA.—The term 'designated rest area' means a passenger seat of an aircraft assigned for crew rest purposes.

"(4) DOMESTIC FLIGHT.—The term 'domestic flight' means any flight or segment of a flight worked by a flight attendant totally within the 48 contiguous States and the District of Columbia.

"(5) DUTY TIME.—The term 'duty time' means all time worked for an air carrier at any place and in any capacity and, with respect to flying, shall begin at the required report time and shall end at the conclusion of the debriefing time, or when released by the carrier, whichever is later. Duty time accrues until the crewmember is given a required rest period by the carrier.

Time spent deadheading, either on an aircraft or by surface transportation, to or from an assignment by an air carrier, time spent ferrying, and time spent attending meetings and training shall also be considered duty time. Duty time continues—

"(A) throughout a rest period of a shorter duration than that contained in subsection (b)(1), (b)(2), or (b)(3), as the case may be; and

"(B) during in-flight rest periods contained in subsection (b)(5).

"(6) INTERNATIONAL FLIGHT.—The term 'international flight' means any flight worked by a flight attendant for which a take off or landing is scheduled outside the 48 contiguous States and the District of Columbia.

"(7) LONG-RANGE INTERNATIONAL NONSTOP FLIGHT.—The term 'long-range international nonstop flight' means a single nonstop international flight scheduled for 8 hours or more of flight time.

"(8) REPORT TIME.—The term 'report time' means a time period of at least 30 minutes prior to the scheduled departure time of the first flight or segment of a flight in a flight attendant's duty period or the time the flight attendant is required to report to work, whichever is earlier.

"(9) REST.—The term 'rest' means uninterrupted time free from all duty.

"(10) SCHEDULED FLIGHT TIME.—The term 'scheduled flight time' means the elapsed time based on the time shown in schedules given by an air carrier to a travel agent.

"(11) SECRETARY.—The term 'Secretary' means the Secretary of Transportation.".

(b) CONFORMING AMENDMENT.—The table of contents contained in the first section of the Federal Aviation Act of 1958 is amended by adding at the end of the matter relating to title VI the following:

"Sec. 614. Duty time of flight attendants.
"(a) Rulemaking proceeding.
"(b) Final regulations.
"(c) Mandated prohibitions.
"(d) Modification of mandated prohibitions.
"(e) Definitions.".

○

FLIGHT ATTENDANT DUTY TIME LIMITATIONS

WEDNESDAY, MARCH 13, 1991

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON AVIATION,
COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:37 a.m. in room 2167, Rayburn House Office Building, Hon. James L. Oberstar [chairman of the subcommittee] presiding.

Mr. OBERSTAR. The Subcommittee on Aviation will come to order.

Today we meet to revisit legislation that has been before this committee and an issue that has been the subject of subcommittee inquiry in the past—Flight Attendant Duty Time, H.R. 14. I had intended to begin with a rather objective observation of the evolution of this issue over a period of time and to set forth the basic questions that the committee is going to consider in the course of today's inquiry, but instead I'll relate an exchange of conversation that occurred last night.

At about 11:30 or quarter of 12:00, I pulled out my folder of materials to begin reading and preparing for this hearing, and my wife said, "What's the subject of your hearing tomorrow?" She is a bright, very insightful, but also very blunt lady, which is why I married her. I said, "It's flight attendant duty time." "What's that all about? What do you need a hearing on that for?" "Well," I said, "flight attendants have to work 14 to 16 hours at a time often." "Well, you can't be alert and functioning effectively, especially under stressful conditions," she said. "No one with an ounce of common sense would make such a foolish requirement. It doesn't take much to figure that out. That's a crazy idea." "True," I said. "It just proves you're not the FAA." [Laughter.]

It shouldn't take more than an ounce of common sense to understand the subject and the issue that we're about today. The history of committee hearings and experiences on this subject, the petitions filed by the flight attendant unions, the denial by the FAA of those petitions, lets the record speak for itself as to whether we need much more than an ounce of common sense to figure out why there ought to be limitations on flight attendant duty times.

We limit the duty time for pilots, we limit it for mechanics, we limit it for flight engineers, we limit it for a whole range of other people. We passed in 1910 an eight-hour work day law, and it seems that we haven't progressed much in the last 80 years. In 1910, the steel companies of America took out full page ads all across the United States, spending well over a million dollars in a campaign to convince the public that steel workers didn't need an

eight-hour day, that 10 hours was just fine for them, and it was in their best interest and it was good for the economy, and that a shorter work day would not be in the best interest of corporate or working America.

We shouldn't have to be sitting here in 1991 arguing an 80-year-old issue. It ought to be just plain common sense. There ought to be some limitations. So at today's hearing we're more in the nature of "speak now or forever hold your peace" than in the nature of an objective inquiry into the subject matter.

I now offer my fully prepared statement for the record.

[Mr. Oberstar's prepared statement follows:]

STATEMENT OF HON. JAMES L. OBERSTAR

The Subcommittee on Aviation meets today to consider H.R. 14, the Flight Attendant Duty Time Act, to provide for the establishment of limitations on the duty time for flight attendants.

This is not a new issue. Today marks the Subcommittee's second hearing on this subject. The Federal Aviation Administration has twice drafted regulations governing duty time limitations for flight attendants. And, the Department of Transportation and the Federal Aviation Administration now have twice refused to establish these limitations.

FAA has long recognized the safety-related need for duty time limitations to prevent excessive occupational fatigue. Duty time limitations for pilots go back to the early days of flying, and today cover pilots, flight engineers, flight navigators, air traffic controllers, mechanics, and dispatchers. Flight attendants, who also perform safety-related functions, are not so covered.

As early as 1978, FAA in written correspondence promised to issue an NPRM on flight attendant flight and duty time limitations and rest requirements by the end of that year.

In 1984 and 1985 flight attendant unions filed two petitions to establish such limitations for their members.

FAA denied those petitions in January, 1989, as not in the public interest. Legislation similar to H.R. 14 was subsequently introduced, and the Subcommittee's hearing was held in May, 1989.

At that hearing, the witness for the FAA told us it had denied the petition because FAA lacked the data on which to base a regulatory decision. The witness announced that FAA would undertake a study to develop those data, and stated that he had the support of the then acting Administrator and the Secretary of Transportation to take whatever action those data, when developed, might indicate.

The ensuing study, completed in September, found wide variations in flight attendant duty times between carriers and segments of the industry, depending on union contracts, company work rules and guidelines. It also found that 23 foreign countries regulate flight attendant duty times. Based on the study, FAA drafted regulations and, in July 1990, sent them forward to the Office of the Secretary.

Each time we inquired into the status of the regulations, we were told that they were still under consideration, and that the Department was preparing to send them to the Office of Management and Budget. Thus, for almost two years, the Subcommittee has taken no further legislative action, believing in good faith that the Department was in fact moving forward on its own.

Today, we learn that the Department has decided against the need for a rule.

The Subcommittee will listen intently and fairly to both supporters and opponents of H.R. 14.

We will also inquire into how and why a safety-related decision by FAA to move forward with a rulemaking was derailed at the Departmental level.

I repeat: this is a matter of utmost importance—aviation safety.

Fatigue, brought on by working long hours on an irregular schedule, is a recognized occupational health and safety issue in all walks of life.

The files of the National Transportation Safety Board are replete with documented cases where fatigue was a factor in accidents, from the trucking and railroad industries to the *Exxon Valdez* oil spill, in which the National Transportation Safety Board cited the fatigue and overwork of the third mate, who was at the helm when the ship ran aground.

The aviation industry likewise recognizes the importance of fatigue, and has imposed duty time limitations for pilots, flight engineers, flight navigators, air traffic

controllers, mechanics, and dispatchers, but not for flight attendants, despite their manifest safety-related functions.

Flight attendants must know the procedures to follow in the event of an emergency, such as operating ditching and evacuation equipment, first aid equipment, and fire extinguishers. They must be able to cope with rapid depressurization, cabin fires, evacuation of passengers, passenger illness or injury, skyjacking attempts and other unusual situations.

Their more routine safety responsibilities extend from the pre-flight briefing to assuring that seats and trays are in an upright position for landing.

Equally important, they must stay constantly alert throughout the flight for any signs of an impending emergency in the cabin.

At the Subcommittee's May, 1989 hearing flight attendants told us of many instances where they had worked tremendously long hours, with very short rest periods, and recognized that fatigue could impair their functioning.

FAA itself has advised the Committee of cases in which flight attendants have been required to work for as long as 24 consecutive hours, and given rest periods as short as 6 hours. In the accident involving Galaxy Airlines in Reno, Nevada in 1985, the NTSB investigation disclosed that at the time of the accident, two flight attendants had been on duty for over 18 hours and were scheduled to continue on duty for an additional 7 hours.

Twenty three foreign countries recognize the need to regulate flight attendant duty times.

Given the fact that the Department and the FAA now have twice refused to establish duty time limitations for flight attendants, it is clear that any duty time limitations for flight attendants in this country will have to come from Congress.

Mr. OBERSTAR. The Chair recognizes the gentleman from Pennsylvania, Mr. Clinger.

Mr. CLINGER. Thank you very much, Mr. Chairman.

As you've said, in the words of Yogi Berra, it's deja vu all over again. This is an issue that we are revisiting once again. We had thought that we would have seen regulations produced which would have established maximum work days and rest standards for flight attendants by this time.

Through the leadership of our colleague and friend, Norm Mineta, legislation was introduced and developed which directed the FAA to initiate a rulemaking on duty times, a hearing was held in the last Congress, and I'd have to say while the testimony was not unanimous, I think that the record did demonstrate a need to promulgate maximum duty day standards. Following the hearings, the FAA met with the leadership of our committee and asked that they be allowed to complete a study on industry practices with respect to duty times. It was their desire, an understandable one, to gain a clear understanding of the common procedures used to schedule duty times and the rest periods for cabin crews. That was a reasonable undertaking.

The study was conducted and completed, and I think, much to their credit, the FAA began to develop a proposed series of regulations. It is my understanding that the FAA's proposals were forwarded to the DOT, where they have languished since last year. I guess the purpose of our hearing is to determine why that continues to be the case. So today's hearing is as much a restatement of our hearings held in May 1989 as it is to coerce the department into moving the regulations forward.

Mr. Chairman, our hearing in the 101st Congress highlighted the important safety role performed by flight attendants, and this is the significant and, I think, unique factor that we're dealing with here that we don't have perhaps in other economic areas—the very

important safety role that flight attendants play and the stresses which they endure while they are carrying out their jobs.

Flight attendants have to demonstrate safety procedures before each flight, they must acquaint themselves with the safety equipment and emergency procedures for many different models of aircraft, including the operation of doors, emergency slides, over-wing window exits, and life rafts, and they must also be able to attend to all sorts of minor and medical emergencies and anticipate problems before they arise. This is a job that requires the people to be very alert and very capable of handling a variety of complex tasks.

The flight attendants perform these functions during work days that can and do vary considerably. Their work day may take them across one or more time zones, they spend several nights each week away from home, and are on their feet constantly. All of these factors contribute to upsetting the body's circadian rhythm, clearly inducing fatigue at a rate far greater than experienced by any other work force, and again, I stress the fact that they are involved in procedures that ensure the safety of the traveling public.

Today's hearing will focus again on the need to pass the Flight Attendant Duty Time Act. The legislation addresses a major inconsistency in the industry. By Federal regulation, maximum duty times have been established for every major segment of the labor force within the aviation industry with the single sole exception of flight attendants, and I believe, and I know you share the belief, that this disparity must be addressed.

Thank you, Mr. Chairman. I also would like to offer for the record, the statement of the Honorable John Paul Hammerschmidt, ranking member of the Committee on Public Works and Transportation.

Mr. OBERSTAR. Without objection, so ordered.

[Mr. Hammerschmidt's prepared statement follows:]

STATEMENT OF HON. JOHN PAUL HAMMERSCHMIDT

Mr. Chairman: As you know, this issue has been kicking around for a long time now. It was more than 6 years ago that the flight attendants petitioned the FAA for duty time rules. Two years ago, after much prodding from Congress, the FAA finally responded. It denied the petition.

It is clear that the FAA could issue duty time rules for flight attendants if it wanted to. The Federal Aviation Act clearly gives it that authority.

The FAA does have rules governing duty time for pilots, mechanics, flight dispatchers, and air traffic controllers. At least 23 foreign countries have duty time limits for their flight attendants. However, the 83,000 flight attendants in this country do not have similar protections.

Back in 1989, this subcommittee held a hearing to examine the issue. At that time, we heard from proponents of duty time rules. They argued that flight attendants had important safety responsibilities that could not be carried out properly if they were suffering from fatigue. On the other hand, opponents of duty time rules pointed out that no accident had ever been attributed to flight attendant fatigue.

During that hearing, the FAA agreed to conduct a study of current airline practices to determine the extent of the problem and whether regulatory action was necessary. That study was completed with impressive speed. However, it has now been almost a year and a half since the study was issued and still we see no action from FAA or DOT.

Last fall, I joined with several members of this committee in writing to Secretary Skinner to urge action. In responding to our letter, the Secretary expressed his desire for a prompt decision.

It is unfortunate that this matter has dragged on for so long. The FAA has the expertise in this area and it is therefore in the best position to establish the proper duty time limits. However, if the FAA does not act, it is likely that this subcommit-

tee will move the duty-time bill, H.R. 14, introduced by my good friend Norm Mineta.

In this hearing, we will once again review the arguments, both pro and con, for duty time rules. Hopefully, we will also get some sense from FAA as to their timetable for action. With this, and the testimony of the other witnesses here today, the subcommittee will have a basis for deciding what action it should take.

Thank you, Mr. Chairman.

Mr. OBERSTAR. Thank you, Mr. Clinger, for giving in your usual thoughtful and scholarly way a review of the subject matter.

Before we begin, I would like to insert into the hearing record, at this point, a statement received from our colleague, Jerry Costello of Illinois.

[Mr. Costello's prepared statement follows:]

STATEMENT OF HON. JERRY COSTELLO

Mr. Chairman, I am pleased to be here today to receive testimony on legislation to limit the maximum duty times required of flight attendants. This a crucial issue both from the standpoint of aviation safety and as it pertains to the employment conditions of a very dedicated workforce.

I look forward to the benefit of the expertise of our witnesses, who will include representatives from the FAA and the National Transportation Safety Board, as well as the flight attendants themselves. In addition, I am particularly interested to hear from my respected colleague and the Chairman of this Committee's Subcommittee on Surface Transportation, Norm Mineta.

We certainly need to remedy situations such as those reported where flight attendants had to work 24 hour shifts with only six hour rests. I look forward to pursuing these issues, and I thank you, Mr. Chairman, for convening us today.

Mr. MINETA. Mr. Chairman, if I might——

Mr. OBERSTAR. If there are no other members who have an opening statement, the Chair will then recognize Mr. Mineta, who will be our first witness.

Mr. MINETA. Oh, I didn't realize I was going to be a witness.

Mr. OBERSTAR. You indeed, Mr. Mineta, are listed as our first witness, and you will speak from your chair.

Mr. MINETA. Okay, because I did want to make an opening statement, Mr. Chairman. I'll yield to the gentleman——

Mr. OBERSTAR. The Chair recognizes the gentleman from Oregon.

Mr. DEFAZIO. Thank you, Mr. Chairman.

I have to go to the Interior Committee and quibble with the Californians about water—the other Californians.

Mr. MINETA. Mr. Chairman, I'd like to reclaim my time. [Laughter.]

Mr. DEFAZIO. But no one should interpret that as being a lack of interest in the legislation before us and the import of that legislation. I wish that I could stay to question the FAA. I just would like to say that, you know, it's extraordinary to me that they reached these conclusions after some somewhat circumscribed study of the issue, applying some rather arbitrary standards. I'm not surprised at their lack of enthusiasm for imposing flight duty standards and times on flight attendants, but I am determined that if the regulatory agency cannot act in this very important manner that the Congress should go forward.

And I go further to say that it disturbs me, not only when we deal with this issue but when we deal with the issues generally of work place health and safety, that the agency chose many years ago to exempt itself from OSHA, which Federal agencies can do for

industries under their control, and then they're supposed to promulgate regulations in those areas, and they have failed to do that, not only in terms of the amount of time spent in the work place but other potential hazards in the work place, including air quality.

It was Congress that had to deal with the air quality issue as far as cigarette smoking goes. There are other cabin air quality issues which I believe the agency has failed to address in a number of other areas, and if the agency doesn't get realistic, they're going to find the heavy hand of this committee and the Congress laid upon them, I fear, and I would urge the FAA to reconsider its position and hope that they will. If not, I'm determined to support the Chairman in his efforts and go forward.

Thank you.

Mr. OBERSTAR. Thank you very much, Mr. DeFazio. We appreciate your comments and your support.

The Chair now recognizes the gentleman from California, Mr. Mineta, our first witness.

TESTIMONY OF HON. NORMAN Y. MINETA, A REPRESENTATIVE IN CONGRESS FROM CALIFORNIA

Mr. MINETA. Thank you very much, Mr. Chairman.

First, let me commend you for your leadership on holding these important hearings on flight attendant duty time limitations.

As you, Mr. Chairman and Mr. Clinger both knew, I've been a supporter of this legislation. I introduced this legislation in the last Congress and introduced it again in this Congress, renaming the bill H.R. 14. This bill has already had the bipartisan support of the House Public Works and Transportation Committee leadership. I am very enthusiastic about the future of this legislation in the 102nd Congress.

This legislation, H.R. 14, will limit the amount of time flight attendants can be on duty to 14 hours for domestic flights and 16 hours for international flights. Surveys of foreign countries with flight attendant duty time regulations show that 14 hours of domestic duty is the general standard. The U.S. could be falling well below the international safety standards, and let me point out very candidly that we are talking about safety.

Mr. Chairman, the United States should be the world leader on aviation issues. Our air travel system is a source of pride for our Nation, and we must continue this tradition when addressing all aviation safety issues. However, the Federal Aviation Administration (FAA) has been unable to move on this issue now for at least 12 years. Now, this lack of action, to me, is extremely distressing. I have a letter from the FAA dated April 21, 1978, which states that the FAA planned to issue a Notice of Proposed Rulemaking on flight duty time rules by the end of that year. And then even as late as this last fall, I received commitments to proceed with this process from the FAA and am again extremely distressed that the FAA has not kept their word.

I don't want to take any more time, Mr. Chairman, I just want to hear from the witnesses today on the status of this important safety measure as well as why we need this safety measure. We

have others in the aviation industry who are subject to duty time requirements. Dispatchers are subject to duty time limitations, as well as the flight deck personnel. It seems to me that in the interest of safety, because flight attendants are the first line of any action as it relates to safety in case of an accident, that in the minimum we ought to be providing duty time limitations for flight attendants.

Again I want to commend you, Mr. Chairman, on your leadership and I await the testimony of our witnesses. Thank you very, very much.

Mr. OBERSTAR. Thank you, Mr. Mineta. We appreciate your contribution, as always, to this subcommittee's work and to the field of aviation generally.

Now the Chair will call on Mr. Anthony J. Broderick, Associate Administrator for Regulation and Certification for the FAA.

If you have any associates you wish to have join you here—as always, Mr. Broderick steps up to the plate alone. No one has the courage to come with him or to stand in opposition to him.

TESTIMONY OF ANTHONY J. BRODERICK, ASSOCIATE ADMINISTRATOR FOR REGULATION AND CERTIFICATION, FEDERAL AVIATION ADMINISTRATION, WASHINGTON, DC

Mr. BRODERICK. Mr. Chairman and members of the subcommittee, good morning. I welcome the opportunity to appear before the subcommittee today on the topic of flight attendant duty time limitations.

A little less than two years ago, I appeared before you, shortly after the FAA denied petitions from the flight attendant unions seeking establishment of regulatory limitations on duty time. You will recall that the FAA denied the petitions in 1989, citing "a lack of concrete evidence showing any correlation between flight attendant duty, flight attendant safety duties, and risk to passengers."

I told you at that time that our decision not to consider rulemaking was based not on a lack of concern about the issue, but a lack of data. We simply did not have a complete or accurate picture of the real world of duty scheduling in which flight attendants operated—what their work schedules were like, whether extra hours worked were because employees sought compressed work schedules or extra hours, whether heavy work schedules were common or aberrations. Little data had been presented during the pendency of the petitions for rulemaking on which to base an objective judgment.

I announced at that hearing that the FAA would vigorously pursue data on flight attendant work schedules and that we would keep you apprised. We have done both of those things. As I committed, we conducted an extensive survey of industry scheduling practices, prepared a report documenting what we found, and have worked to keep you and your staff apprised of our efforts along the way.

Our report on the study of "Current Industry Practice: Flight Attendant, Flight Duty, and Rest Times" reflected a review of current air carrier industry scheduling practices and actual work hours of flight attendants. The study targeted longer than average duty

days, below minimum rest periods, and instances of long flight hours. Certain segments of the industry—actually, one segment—were found to encounter flight attendant duty hour problems more frequently than others because of the nature of their operations, although these problems were by no means prevalent.

One statement I made at the hearing was that we were going to try and develop a data base that will convince all of us of the correctness of whatever decision we need to make as a result of that, and it will be there in black and white. That was my goal. Unfortunately, what we have found is not black and white. The preponderance of flight attendant schedules appear to be well within a zone of reasonableness. Some occasional work practices, on the other hand, appear to be excessive. The data are not dispositive, however.

Moreover, the dilemma that we see is that while the cost of recordkeeping alone if duty limits were imposed would total more than $1 million each year, there are no readily quantifiable safety benefits that we can identify to offset the cost. This is a fact which we noted in denying the flight attendant union positions, and it remains undisputed today.

Data from 1975 through 1989 showed that approximately 38,000 air carrier passengers and several thousand additional crew were aboard aircraft involved in evacuation or evacuation-related occurrences. We have been unable to identify a single incident in that array, however, that fairly could be said to have adversely been affected by flight attendant fatigue. In other words, the data do not identify flight attendant fatigue as a factor.

As you know, the regulatory process today is governed by a variety of legislative and legal requirements mandating that we evaluate and balance costs and benefits—impacts on small business, paperwork burdens, and the like. In this instance, based on the absence of demonstrable, quantifiable benefits to the traveling public that would offset the clear costs of a rule, the Administration has concluded that rulemaking is not warranted. I want to stress, however, that this does not mean that we do not place a high value on the safety role of flight attendants or that we in the FAA are unconcerned about the issue or that it's a closed book.

To the contrary, we believe it's important to stress with industry the need for appropriate attention to flight attendant scheduling. We're developing an advisory circular that will be widely distributed in the industry, outlining our study findings and what we believe is appropriate scheduling of flight attendant duty time. Should research results or other data suggest in the future that a regulatory solution is appropriate, we will address that possibility after reviewing that data.

Before closing, Mr. Chairman, I'd like to state that the Administration strongly opposes the enactment of H.R. 14, which is pending before the subcommittee. Our analysis reflects that the enactment of this legislation, with its detailed scheduling requirements, would impose costs of more than $1 billion over a 15-year period on the airline industry. Discounted to 1989 dollars, this cost is still more than $550 million in 1989 dollars.

One of the main themes of the Public Works and Transportation Committee's recent aviation posture hearing was, of course, the difficult financial plight currently being experienced by U.S. carriers.

An additional burden of more than $550 million in today's dollars on our airlines without a corresponding level of safety benefits would be a substantial undue financial drain on their resources and could serve to lessen their ability to shoulder high priority safety responsibilities. Costs under H.R. 14 would be incurred for additional hotel stays, flight delays, staffing requirements, positioning, training, et cetera.

As you know, H.R. 14 would require an air carrier to provide a flight attendant with at least 10 consecutive hours of rest after a duty period of 14 hours or less in domestic operations. The bill provides no means of extending the 14-hour duty period to contend with operational delays, nor does it provide any means of reducing the rest period. The bill's 10-hour domestic rest requirement could pose conflicts between flight attendant schedules and pilot schedules, in that pilots can be scheduled to receive as little as eight hours rest.

In closing, Mr. Chairman, I'd like to acknowledge that I appreciate the concerns you and other key members of the subcommittee have long had over the difficult issue of flight attendant duty time. Your personal commitment and that of your colleagues to aviation safety is to be commended. I look forward to continuing to work with you and the members of the subcommittee on the difficult challenge of improving the safety of our air transportation system, and I'd be pleased to respond to any questions you have.

[The full text of Mr. Broderick's prepared statement appears on page 87.]

Mr. OBERSTAR. Thank you very much, Mr. Broderick. I don't need to restate the extremely high regard in which I hold you professionally and personally for your work in aviation and for your commendable—that's even a paltry word to use—concern for safety and your advocacy for safety in every aspect of aviation, and for your command of the subject matter. But something has happened here in this area. There's a blind spot.

I just want to take you back to FAA's July 18, 1985, Final Rule for Flight Crew Members in the Federal Register. "Safety benefits are not specifically quantifiable due to a lack of detailed accident records. Specifically, accident records rarely address cumulative fatigue, which is the primary problem addressed by these amended standards." Now you're coming back and saying, "We can't impose a rule, because we haven't been able to quantify it"—that is, the issue of safety and fatigue in the case of flight attendants. You're saying that while it may be unquantifiable for the flight deck, it's important enough to do something nonetheless in 1985. In 1991, you come back and say, "Well, because we can't quantify the benefit, we're not going to take the precautionary action."

In every aspect of aviation safety, FAA insists on a measure of redundancy, a back-up, in the wise and experience-prompted knowledge that at four, five, six miles in the air, there is very little margin for error and that it is better to err, if one errs, on the side of safety. But in this area, the FAA says, "Because we can't quantify the safety benefit, we won't require an action to be taken."

So explain how safety is quantifiable in the flight deck but not quantifiable in the cabin.

Mr. BRODERICK. Mr. Chairman, the pilot flight duty time rules are a very complex array of regulations that have been in place for many decades. What is undisputed in the scientific community is

that there are many studies that relate pilot performance, whether it be in actual airplane simulators or in other psychological testing device—you can relate actual pilot performance in controlling the airplane or controlling instruments that directly affect the safety of flight to fatigue of various types.

The regulation that you talked about was a relatively minor, in the scheme of things, amendment to the domestic flight and duty regulations for pilots. It was not the rule that established the pilot regulations for the first time, but merely an adjustment of existing regulations. I think it is difficult to compare the actual second-by-second control of an aircraft or any other complex machine to the duties of flight attendants.

There is a wide array of scientific literature that we have seen that relates certain duty time in the air to fatigue but then goes the next important and critical step—relating fatigue directly to performance of the job tasks for pilots. The kind of literature that we have for flight attendants relates to either a flight attendant in a few cases—or a shift worker, which is not directly applicable, in other cases—worked hours to fatigue. But I know of no literature, no scientific evidence, no objective evidence of a non-scientific nature that relates the kind of fatigue we see from increased duty hours to safety of flight or safety of the passengers. It simply isn't there. We're talking about two different things when you talk about pilots and flight attendants in terms of what they do second by second.

Mr. OBERSTAR. Well, I don't think you need to be very arcane or philosophical to understand fatigue. Vince Lombardi once said, "Fatigue makes cowards of us all." He was talking about football players. In a larger sense, fatigue draws us down, takes that edge of competitiveness off, dulls our ability to respond decisively and instinctively and quickly and with sure judgment to situations. Let me repeat my wife's statement that it doesn't take an ounce of common sense to figure out that when you're tired you don't work as well as when you're alert and fresh.

And if you remember Galaxy Airlines, the first hearing I held on the subject of aviation as chairman of the Investigations and Oversight Subcommittee, the two flight attendants on board that aircraft had been on duty for 18 hours and were scheduled to work another seven. That almost violates the Slavery Act.

My five minutes are up, and the Chair will recognize the gentleman from Pennsylvania, Mr. Clinger.

Mr. CLINGER. Thank you, Mr. Chairman.

Thank you, Mr. Broderick. I share the Chairman's very high opinion of you and of the work that you do and of your dedication to improving safety standards throughout the industry, and I just regret that we have this disagreement on this issue.

In your testimony, you state that your analysis of the legislation shows that the detailed scheduling requirements would impose an additional cost to the airline industry of about $550 million over the next 15 years. You go on to say that without a corresponding level of safety benefits, this would be an undue financial burden on the industry. I think we can understand that, given the problems the industry presently has.

Does this translate into approximately $37 million per year in additional costs for airlines?

Mr. BRODERICK. If I remember correctly, the number of $550 million is a discounted number, so that may be about right over a 15-year period in today's dollars. You really shouldn't do that kind of arithmetic with discounted dollars, but I think it's about $50 million a year actually nowadays.

Mr. CLINGER. Additional cost?

Mr. BRODERICK. Yes.

Mr. CLINGER. Also in your testimony, you indicate that this bill does not provide sufficient flexibility to extend the 14-hour duty period to deal with operational delays or other situations which might affect the length of the rest period—in other words, that it is too rigid in its requirements. In addition, the 10-hour domestic rest requirement may conflict with the pilot schedules, since they can be scheduled to receive as little as eight hours of rest under present law.

Would you be more inclined to support the legislation if we were to give you the flexibility to provide for these types of situations? In other words, is the objection to the specifics of the bill, or is the objection to doing anything at all in this area?

Mr. BRODERICK. I think the latter, Mr. Clinger. The difficulty that we have is that when you take a look at the data that we have seen on actual flight attendant duty scheduling or actual work hours, the vast majority of the industry has a tiny, tiny fraction of cases in which one sees scheduling or actual duty hours over, say, 14 hours to draw that line.

It's very difficult to see any benefit coming from regulating these major or national carriers—even the regionals, for that matter—and yet they would still have to pay all of the recordkeeping costs and any of the other costs that are associated with the particular duty regulation that were enacted. Very little benefit would be associated with that. There would certainly be a greater reduction in fatigue in the supplemental carrier area, but again, the link between fatigue and job performance, safety performance, is something that is missing.

So it's a more general objection rather than a specific one.

Mr. CLINGER. You talk about the links missing, but isn't it very difficult to prove a connection? The connection may very well be there, but isn't it difficult to prove a connection between the fatigue that an attendant might be suffering and loss of life? It seems to me to be asking a bit much to have that measure of proof before you would go ahead with the regulation.

Mr. BRODERICK. Well, let's not look at something like loss of life, because as I've said before on this subject and others, we certainly don't require a body count to take regulatory action, but the Chairman mentioned earlier smelling smoke. It's not at all clear to me that someone who has worked for 14 hours or has been on duty for 14 hours smells smoke significantly more quickly than someone who has been on duty for only 12 or more slowly than one who has been on duty for more than 16 hours. And when you combine that with all of the mechanical devices that we have tried to add to aircraft to ensure that you don't have to rely on the human factor for something like smoke, I don't see the benefit documented for this.

I'm not talking about lives lost; I'm talking specifically about what is the benefit that we expect to achieve by, let's say for the sake of argument, reducing a domestic duty schedule from 15 hours to 14 hours? We see a cost associated with that. The cost can be significant. It can mean a canceled trip and hundreds of passengers staying overnight somewhere and being inconvenienced because of the inability to break a regulation. Additional flight attendants are required to support reduced duty times when you reduce flexibility, but I don't see the benefits associated from a safety viewpoint.

Mr. CLINGER. Well, I see my time has expired. Thank you, Mr. Chairman.

Mr. OBERSTAR. Mr. Mineta.

Mr. MINETA. Mr. Broderick, I can't believe what I'm hearing from you. Did you write your statement today?

Mr. BRODERICK. I worked with Mr. Randall to write it, sir.

Mr. MINETA. Who's Mr. Wrangle?

Mr. BRODERICK. Mr. Randall. Bert Randall, who is our Assistant Chief Counsel for Legislation.

Mr. MINETA. And does he have experience as a flight attendant?

Mr. BRODERICK. No, he doesn't.

Mr. MINETA. Do you?

Mr. BRODERICK. No, I don't.

Mr. MINETA. And I take it your statement was cleared by OMB?

Mr. BRODERICK. Yes, it went through the normal executive clearance process, sir.

Mr. MINETA. You know, I'm going to take issue with the Chairman of this committee and the ranking Republican. I thought you were a professional person who could look at things objectively in terms of your duty and in terms of regulatory action. Knowing you and knowing of the conversations and the testimony I have heard from you for 17 years as a member of this subcommittee, eight years as its chairman, I don't know who is yanking your chain, but I cannot believe that you have come to this position in terms of this testimony based on what we have seen in the past.

Now, you're saying right now that you can't, for instance, determine whether or not a person is going to be less able to smell smoke because of 16 hours of duty as compared to a person who's two hours on duty, and you don't have the statistics to back you up. Is that what you're saying?

Mr. BRODERICK. Yes, sir.

Mr. MINETA. Well, what about a person who's been on duty for 18 hours and has lightning strike on the airplane and is so tired or so awe-struck from that experience that they can't get out of their jump seat to open a door? That was the testimony as I can recall hearing as little as two years ago. There's nothing to say about the conversations that you and I have had when you said, "Norm, those regulations will be out next Friday"—you can deny it, that's fine, I'll buy that. You can deny it, there's no record of that. So all I know is I've been jerked around by you, and I don't appreciate it.

Now, you're saying that there is no data at all to back it up. Have you tried to bring that data to a close?

Mr. BRODERICK. Mr. Mineta, we've reviewed every bit of data that's been submitted by flight attendants and all of the data that is available to the scientists that we have——

Mr. MINETA. But that's like me saying that I have to ask you the right question to get a good answer out of you. I'm asking you have you done anything of an affirmative nature——

Mr. BRODERICK. In terms of literature review, yes. We haven't conducted——

Mr. MINETA. Are you just a depository for information?

Mr. BRODERICK. We haven't conducted independent studies, and frankly I'm not sure how to conduct an independent study, because I'm not sure what we'd measure. We certainly could try to relate fatigue to some performance, but then in actually conducting a study to determine effects of fatigue, you have to do what's called a double-blind test, in which neither the participants nor the people conducting the test know what's going on, and that's a very difficult thing to do with this.

Mr. MINETA. How is it you're able to do those investigative studies with a lot of investigative effort on flight deck personnel?

Mr. BRODERICK. Because we have simulators, and we know what we're measuring. We're measuring landing performance.

Mr. MINETA. Well, then doesn't that say to you that maybe their job is even more difficult?

Mr. BRODERICK. On the contrary. I would think perhaps it isn't as difficult. It doesn't require the kind of hand-eye coordination, constant motor control, controlling a ship second by second. If a flight attendant is inattentive for five seconds, it's not clear that that is going to cause a safety problem. Clearly, it's possible to do so with a pilot.

Mr. MINETA. But it may not be causal, but at the time of some incident, aren't you relying on that person to do something?

Mr. BRODERICK. You're relying on people to act in cases of emergency, with regard to their training, the way they are taught to act. Psychologists will tell us, human factors experts will tell us that it is not clear that in cases where people are excited and in an emergency situation that small changes in things like duty time will adversely affect their performance.

Mr. MINETA. Well, then, Mr. Broderick, what is your definition of "benefit?"

Mr. BRODERICK. An improvement in safety or a reduction in hazard.

Mr. MINETA. And you say, "I don't see the benefit to be achieved."

Mr. BRODERICK. That's correct, the safety benefit to be achieved.

Mr. MINETA. And when you cite the cost to the airlines of what they might be subjected to, how do you measure the benefit? If you know the cost of what it may be to the airline, how do you then measure benefit? If you're looking at a cost-benefit study—I guess that's what you're getting at——

Mr. BRODERICK. Well, that's correct. We do it like—for example, let's take aging aircraft or corrosion control or collision avoidance. The collision avoidance system—we've only had four mid-air collisions since 1971 in the last 20 years involving air carrier aircraft. That's not very many accidents. In the last couple of years, we've imposed regulations which are going to cost the industry some $500 million between now and 1993 to avoid those accidents. We can

quantify that benefit. That benefit is, if you will, avoiding one accident every five years.

Mr. MINETA. Well, the cost to the industry is minuscule as compared to the cost to the public and what we're investing in that air traffic control system for that safety benefit. But it seems to me that if you're going to make this argument that it's going to impose a cost of more than $1 billion over a 15-year period, it seems to me then we ought to be rolling back some of the other kinds of regulatory imposition that we make on the airline industry. Does that make sense?

Mr. BRODERICK. I certainly wouldn't want to reduce safety benefits that our current regulations provide in order to put in a regulation which has not identifiable safety benefit.

Mr. MINETA. Let me ask you, Mr. Broderick, do you think that these——

Mr. OBERSTAR. The gentleman's time has expired.

Mr. MINETA. Do you think these people are there just for serving the food, then?

Mr. BRODERICK. Absolutely not. They're important members of the crew. They are——

Mr. MINETA. And yet you are not able to define what that safety benefit might be?

Mr. BRODERICK. I am not able to define a change in that safety benefit with a change in these duty regulations.

Mr. MINETA. Well, Mr. Chairman, I hope we might have an opportunity on the second round to pursue this. You know, when I look at Brazil, Chile, Columbia, Netherlands, Saudi Arabia, other countries that have a few flight attendants and they have maximum duty time limits, it seems to me that we are pretty much as enlightened as some of these other countries and that we ought to be in the minimum, if we are going to be leaders in the safety business, in the aviation business, that we ought to be doing the same.

Thank you, Mr. Chairman.

Mr. OBERSTAR. The gentleman from Missouri, Mr. Hancock?

Mr. HANCOCK. A couple of quick questions. On this situation of the flight attendants living maybe two or three hours flight time from their duty assignment because of their place of residence, has this been considered? Has there been any effort on the part of either the unions or the flight attendants to at least consider a couple hours flight time before duty combined with 14 hours or whatever the flight time is, mean from a rest standpoint?

Mr. BRODERICK. Mr. Hancock, you raise a very important point. For maybe clear reasons, it has not been raised by proponents of duty time regulations, but it is something that we've considered. It's a very difficult thing to regulate off-duty activities of crews, whether they be pilots or flight attendants. One of the difficulties that we have with duty time regulation is that roughly one in four flight attendants actually commutes to work.

Now, when I say "commutes to work," I mean flying from one city to another and then beginning work. This is off-duty time. It's because they are based, for example, here in Washington and might work out of New York or Chicago or Dallas. They are adding some time to the beginning or end of their work day by commuting. It's not technically duty time, but it gives us pause, because I

ask the question, "Well, if we're going to regulate duty time to, say, 14 hours, shouldn't we begin to consider not allowing people to have these long commutes at the beginning of a duty day?," and that gets into a tremendously complicated arrangement of regulatory intrusion on people.

It's very difficult to contemplate and it's one that causes us some pause in evaluating duty regulations.

Mr. HANCOCK. Well, I understand that one of the "fringe benefits" from an attendant's standpoint is that they can live in Florida and yet operate out of San Francisco, I suppose, or some other area. Frankly, it takes me a few hours after that four-hour flight from my district to really get back on par.

Is there any other industry that allows their employees to live anyplace they want to in the United States and yet operate out of almost anyplace they want to, other than the airlines?

Mr. MINETA. Would my colleague yield on that? We Members of Congress do. [Laughter and applause.]

Mr. HANCOCK. Well, and if you would agree, I think that maybe that might be part of the problem. [Laughter.]

On that reference, I think that the gentleman from California made my point. Thank you very much.

Mr. OBERSTAR. The gentleman from Texas, Mr. Laughlin.

Mr. LAUGHLIN. I would point out to my friend from Missouri that the Constitution allows us to live where we desire.

Mr. Broderick, I must join with my Chairman of the Surface Transportation Committee in expressing my severe disappointment in your appearance today and in reading the words in this very disappointing document. Although I'm only in the start of my second term, I recall each of your occasions here, and you promised this subcommittee that there would be rules forthcoming from the FAA on this very subject matter.

And you may recall in a different hearing room, I told you I was sick and tired of telling flight attendants that I was on the Aviation Committee. Do you remember that?

Mr. BRODERICK. Yes, I do, sir.

Mr. LAUGHLIN. Just about a year ago, because you all would not come up with any rules or regulations on work standards, and I find it totally inhuman and unacceptable on your part to come in here and equate no deaths after 38,000 air carrier passengers have evacuated airplanes.

Now, the FAA has set hours that pilots can fly. Isn't that true?

Mr. BRODERICK. Yes, sir.

Mr. LAUGHLIN. And there would be instances, wouldn't you agree, that they could actually fly longer and not have deaths occur? Wouldn't you agree with that?

Mr. BRODERICK. Yes, sir.

Mr. LAUGHLIN. But you restrict their hours for flying for safety reasons.

Mr. BRODERICK. Yes, sir.

Mr. LAUGHLIN. And have you had the occasion to sit in a cockpit?

Mr. BRODERICK. Yes, sir.

Mr. LAUGHLIN. Okay. Would you agree with me that the physical activity of flying an airplane with today's computers is not near as

physical as the flight attendants work back in the cabin of pushing the carts around and helping the disabled and helping the senior citizens with their wheelchairs and braces, and the skiers who have casts on their legs? I have seen a number of patients who have had major surgery getting assistance from flight attendants. Would you agree with that?

Mr. BRODERICK. Yes, I would.

Mr. LAUGHLIN. Now, I want to know how many of these 38,000 evacuations occurred when the flight attendants were approaching the 14th hour of work on their work schedule?

Mr. BRODERICK. We have no idea, sir.

Mr. LAUGHLIN. In the skilled investigative techniques of your administration in the FAA, you all cannot determine that?

Mr. BRODERICK. No, records haven't been kept until very recently on things like that.

Mr. LAUGHLIN. So to rely on that would be to rely on untested information?

Mr. BRODERICK. Well, it represents the total array of every evacuation that's occurred in 15 years.

Mr. LAUGHLIN. You cannot with any degree of integrity tell this subcommittee, can you, Mr. Broderick, that those evacuations occurred during the first two or three hours of work, or the last two or three hours of work, can you?

Mr. BRODERICK. No, I can't.

Mr. LAUGHLIN. So, they really don't mean anything, do they?

Mr. BRODERICK. I think, on the contrary, they do. The point that we were making there is that in every one—actually there were some 400 evacuations and some 38,000 passengers, and we've never had a report of anything adverse—not death or injury—anything adverse occurring because of fatigue associated with one of those evacuations.

Mr. LAUGHLIN. Have you ever been on an airplane that had to be evacuated?

Mr. BRODERICK. No, I never have.

Mr. LAUGHLIN. Nor have I, and I hope and pray to God I don't have to.

Mr. BRODERICK. They're very rare events.

Mr. LAUGHLIN. But given the choice, would you rather have a flight attendant, who has been on duty 2 hours or 14 hours, assisting you or a loved one.

Mr. BRODERICK. I don't know that it makes a difference, sir. In the case of an emergency, people are not clearly going to perform differently. What we're talking about is subtle differences, not the difference in whether or not you're able to actually perform a duty that you've been trained to do.

Mr. LAUGHLIN. Do you watch football?

Mr. BRODERICK. Once in a while.

Mr. LAUGHLIN. The winning pro teams don't run their star quarterback in heavy scrimmage and combat-type conditions on the training field on Friday and Saturday before the Sunday game, do they?

Mr. BRODERICK. I guess not.

Mr. LAUGHLIN. There is good reason for that, isn't there?

Now, the other thing I had a problem following you on, is this business about schedules. You remember you talked about flight attendant schedules? Well, they don't fly the airplane, do they?

Mr. BRODERICK. No, sir.

Mr. LAUGHLIN. Don't the pilots?

Mr. BRODERICK. Yes.

Mr. LAUGHLIN. And they have fewer hours, don't they?

Mr. BRODERICK. That's not clear. It depends upon what the situation is.

Mr. LAUGHLIN. That's right, because we don't count sitting time around the airport in between flights as work time, do we?

Mr. BRODERICK. Well, it's not flight time.

Mr. LAUGHLIN. For flight attendants?

Mr. BRODERICK. Well, this rule would. Yes, it would. That's part of the problem. Pilots are regulated, generally speaking, with regard to flight time. The proposed regulation called for in H.R. 14 is a duty time rule. It counts time sitting around the airport. Most of the time in long duty days, people are not actually in flight. The problems arise when you have on-the-ground delays where they're not pushing carts or assisting the elderly, but they're in fact sitting around the airport waiting for a flight to take off.

Mr. LAUGHLIN. If the Chairman will bear with me for one more question—I realize my time is up.

Mr. Broderick, I understood you to say that one of the reservations you and the FAA, and whoever jerked your chain to write this report, had was the expense to the airlines for this new recordkeeping, if we had different hours for the flight attendants. Did I follow you on that?

Mr. BRODERICK. That's correct.

Mr. LAUGHLIN. Don't they keep hours now on what the flight attendants work?

Mr. BRODERICK. No, that's one of the things that our study found. They keep payroll records, but they don't consistently report flight time or duty time or rest time. They would have to create an entire new and very large recordkeeping system, the cost of which we estimate at about a million dollars a year.

Mr. LAUGHLIN. Well, don't they pay these people by the hour or by the trip?

Mr. BRODERICK. Yes, but the records are not uniform in a way that you can analyze them, as our studies showed. That's not controversial; that's a clear statement. We would have to have a standardized new industry-wide recordkeeping system created. It doesn't today exist.

Mr. LAUGHLIN. I find that unacceptable, Mr. Broderick. In this day of computers and when we can do so many wonderful things on a computer like log in when we're reaching a maximum use on a piece of equipment or things like that. So I thank you for your appearance.

In my close, I will tell you in response to your close, that I find your presentation totally unacceptable and your opposition to this bill unacceptable. Thank you very much.

Mr. OBERSTAR. The gentleman's time has expired.

The gentleman from Kansas, Mr. Nichols.

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Mr. NICHOLS. The question I guess, Mr. Broderick, I would have is in connection—we've heard it referred to before about the other countries that have rules established regulating flight attendant. How do you answer the criticism that approximately 24 countries have promulgated these rules establishing the flight attendant time, and here we are still waiting?

Mr. BRODERICK. Virtually every one of those countries has flight attendant duty time rules that are similar to or modeled after pilot rules, which derive from the fact that the airlines are owned by the state. What you really see is, for example, United Airlines' operating rules becoming a State law. That's what happened in virtually all of those countries.

British Airways, for example, until recent times was a state carrier, so you had a state law which was really a work agreement. That was the way they ran the company, and because it was a state-owned company, it was a state law. That's what happened, then. When they privatized the company, the laws stayed the same. Just like some of the regulations governing National Airport when we sold National Airport and Dulles, or leased it.

So generally speaking—in fact, let me put it another way. I know of not a single safety analysis upon which any of those 23 or 24 sets of flight attendant duty regulations is based.

Mr. NICHOLS. Okay. So it's not an apt comparison, then, really, the way they're set up.

Mr. BRODERICK. I can't see it being an apt comparison at all. If you wanted to make a comparison, you'd have to say how many airlines have contracts or work rules of some kind that they follow compared to these other country laws.

Mr. NICHOLS. Okay. Now, if the airlines were required—since I come from a more rural area, Wichita, Kansas—if they were required to regulate the flight attendant duty time, what kind of an effect would this have? Would this be an adverse effect, as you see it, then, on rural communities and service to those?

Mr. BRODERICK. Well, one has to project, but clearly, at the end of the trip line, one of the things that our study showed was that the regional carriers do have difficulty in rural areas. The reason they have difficulty is that the services are not always readily available to do maintenance or service the airplane as required, and one can envision two scenarios.

One, certainly a greater degree of lack of service at the end of long, thin rural routes because of the inability to continue a flight because the clock has run out on duty time. But I would expect that the airlines would also then reevaluate, because of the costs and the marginal return on some of these routes, whether or not just to restructure the route to avoid the difficulties that they would run into and just eliminate service to some of the smaller cities. I don't see why they would not do that.

Certainly, if there were no law banning them from doing that, which there isn't, I think that's likely to happen. When you have marginal routes and increased costs that don't provide any benefit, and you can see a way to reduce the impact of these costs by eliminating a little bit of service which isn't profitable anyway, I would expect that kind of thing might occur.

Mr. NICHOLS. I think that finishes me. Thank you, Mr. Chairman.

Mr. OBERSTAR. The gentleman from New Hampshire, Mr. Swett?

Mr. SWETT. Thank you, Mr. Chair. It's a pleasure to be able to serve on this committee with you, and I appreciate your bringing before us important legislation such as this for the examination of the conditions under which flight attendants have to serve, and I appreciate my colleague, Mr. Mineta, having sponsored this legislation.

It seems to me, Mr. Broderick, that you are being placed on a hot seat that probably is rightfully deserved, in listening to your testimony. I am hearing a number of things, not only at this subcommittee but at other subcommittee meetings and committee meetings in the Public Works and Transportation Department, which relate to the decline of the United States airline industry, and certainly the points being brought up in other meetings that I've attended and those brought up by my colleague, Mr. Laughlin, about the recordkeeping situation points out just one more example of why our airline industry is in the deplorable situation that it is in.

I don't think that this is something that should be left as a status quo item. It ought to be changed. I think that there are positive benefits to be derived just from establishing proper use of technology and recording proper work times for the employees of this industry, and I think that there are benefits to be derived.

You spoke about the situations in socialized companies—airlines that are owned by the state—as these kind of conditions being state laws. I would like to explore that a little further. You mentioned that as these companies that were owned by the states were privatized, that these rules and regulations were adopted in the private sector, and that was because of the fact that they were passed as state laws.

My question to you is would these rules in fact not have taken place, in your mind, had they not been established as laws? I'm not quite sure I could follow your reasoning on that.

Mr. BRODERICK. Well, the question was why do so many other countries have regulations that we don't, and I was pointing out that these national laws in other countries are really, as a general rule, the product of past or even present work contracts between employees and the employer. The employer is not a private company or likely was not a private company, but is in fact the government. So when you ask——

Mr. SWETT. But does that mean that the government has more concern for the safety of its employees than private corporations?

Mr. BRODERICK. No, what it means is that if you want to talk about—let's just pick Chile, for example. If you want to talk about the work rules that the government of Chile has negotiated with LAN Chile Airlines and compare that to the work regulations in the FAA, that's not a fair comparison. You really should look at United Airlines.

Mr. SWETT. Why is that not a fair comparison? I mean, the government is the employer in Chile; United Airlines is the employer in the United States. They both are operating airlines that meet similar situations.

Mr. BRODERICK. And United Airlines has work rules which are generally likely to be comparable to those of Chile.

Mr. SWETT. Where do they differ?

Mr. BRODERICK. I don't know. I would be happy to provide for the record a detailed comparison. It was in our study the kinds of work rules that these other countries have, but the question at hand, I think, is not United's work rules, but whether or not the Government should have work rules which overlay those of United Airlines.

Mr. SWETT. But my understanding is that these governments do address the situation that we're discussing this morning, which deals with fatigue factors and its impact on safety within the airline industry. Is that correct?

Mr. BRODERICK. They do as employers of those people, yes, sir.

Mr. SWETT. And so I believe that you can use that as a comparison where in the same type of industry, under certainly a different type of ownership, these issues are being addressed, where they are not in our industry. Is that a fair statement?

Mr. BRODERICK. No, if you make that comparison, I think you would find that our employers are addressing those issues, and they have done them in different ways, but generally speaking, the major and national carriers have work rules. The vast majority of flight attendants in the United States are covered today by industrial work rules. Contracts.

Mr. SWETT. Are there other industries in the United States that operate under these same broad rules?

Mr. BRODERICK. The aviation industry is unique in terms of labor regulations of hours of work because of the nature of the business. Virtually all other industries, I am told, though I'm not an attorney, are covered by the Fair Labor Standards Act, which doesn't apply to flight crews and other people that are regulated by the Federal Aviation Act.

Mr. SWETT. And is also unique in its ability to hire people who can go beyond the typical kind of physical requirements that anyone in the work place would have to encounter in this country.

Mr. BRODERICK. International flight or indeed transcontinental flight sometimes requires very long duty times which couldn't be accommodated by a normal eight-hour day.

Mr. SWETT. Is there a test that is given to flight attendants and pilots that requires them to remain alert for 24 hours without sleep and then they are given certain tasks to fulfill in order to determine whether they are physically capable of maintaining a high level of performance at this time?

Mr. BRODERICK. Well, the FAA does something on the order of 20,000 en route inspections every year, in which we fly on airplanes with flight crews in the front or in the back of the airplane and assess their performance. Those are in fact literally tests. Passing the test will not get you anything; failing the test could cause you as a pilot to lose a license, and——

Mr. SWETT. They're not at any point—I'm sorry for interrupting. My time is up.

I'd appreciate the Chairman's allowing me to pursue this line of questioning for one more minute.

There are no tests at this time when they are doing their observation where they can determine whether reaction time or a clarity of thought is being impaired because of overextended work hours?

Mr. BRODERICK. Scientifically, they have done research, but there are no routine tests for every employee, no, sir.

Mr. SWETT. I appreciate your coming before this committee. I think it's always valuable to have the opposing position. I feel that your arguments are very weak in this case, and I hope that you can come to recognize that before this bill comes before the House. Thank you very much for you testimony.

Thank you, Mr. Chair, for allowing me the time to pursue these questions.

Mr. MINETA [assuming chair]. The gentleman from Illinois, Mr. Poshard?

Mr. POSHARD. Thank you, Mr. Chairman.

Mr. Chairman, I'd like to ask unanimous consent that my prepared statement be entered into the record.

Mr. MINETA. Without objection, so ordered.

Mr. POSHARD. Mr. Broderick, thank you for coming before the committee. I just have a couple of brief questions. I know there are other witnesses here.

I noted in the study that you examined over 12,500 records, and I'm just wondering. I'm reading from the study here which states, "The instances of below minimum rest or extended duty periods contained here are the result of a concentrated effort to identify appropriate records or search for worst cases. Thus, more examples probably were discovered in this study than would have been found if the same amount of effort had been invested in a pure random sampling, given the same constraints in terms of records availability, time, and resources." So you made a concentrated effort to not just randomly sample cases but to find worst cases, and in those 12,500 records that you examined, you only found six cases which exceeded 18 hours of the duty schedule.

In all honesty, and I'm not trying to be super critical of your investigation, I think individual members of this committee hear at least six cases a month anecdotally from flight attendants that they themselves have worked at least that long. How do we get such a divergent view from people who are flight attendants, who contact us regarding to this issue, as opposed to what your study finds when you're actually trying to look for the worst case scenarios? I'm just trying to——

Mr. BRODERICK. I think it's just a question of the numbers, sir. There are 10 million flights a year, there are some 80,000 individual flight attendants, and we only looked at—actually, it was 12,500 records roughly, and the numbers that I've got are 7,206 actual duty periods. So we only looked at a small fraction.

I would rather look at percentages, and if you look at percentages, for example, for the major carriers—the United, American, that size of carrier—less than 2 percent of all of the records that we looked at showed actual duty days—actual duty days, now—over 14 hours. It's a very small percentage, clearly not the prevalent work habit or work requirement.

Mr. POSHARD. But could there be some inconsistency here in the method used for recordkeeping by the companies and what actually goes on with the attendants? Because we're getting two different viewpoints here between the records that you examined and what we hear constantly from people who are on the job.

Mr. BRODERICK. I don't think there's inconsistency, because we're fundamentally talking about pay records, but I certainly would think that there would be a different weight attached to the seriousness of the problem if you look at different sides of the argument.

Mr. POSHARD. I think what we have here in regard to trying to collect data and objectify your assessment is we're trying to put objective data in place on what is a very subjective evaluation in terms of the ability of these people to function under very stressful situations at different times. I don't know how we can objectify the effect of staying up 12 hours or 16 hours in a row on a duty schedule with very little rest in between and say because this was all the hours that were worked, there were no accidents attributed to this or whatever. I mean, it may very well be that we have not encountered a disaster along these lines in spite of these things as opposed to because of them. You know, I'm very concerned about this.

I appreciate your being before the committee. I wish there was some way we could rectify the difference between the views of the people who work and the objective data that you've accumulated here. Thank you.

[Mr. Poshard's prepared statement follows:]

STATEMENT OF CONGRESSMAN GLENN POSHARD

Mr. Chairman, thank you for calling today's hearing on H.R. 14 and the issue of flight attendent duty restrictions. Since almost all of my colleagues in the House and I spend a good deal of our time traveling by air, issues dealing with flight safety quickly catch our attention.

More than anything else, this bill is a safety measure. It's not a short-circuiting of the collective bargaining process or an unfair Government restriction of an employee's right to work. The bill is designed to improve passenger safety on our Nation's airlines and to prevent the kind of overwhelming fatigue which working around the clock can cause.

Today's hearing sends the right signal to the Department of Transportation. It lets them know we want them to finish the rulemaking process and put into effect regulations which protect the health and safety of flight attendants and our Nation's air passengers.

It would be a relief if, following this hearing, the Department would expedite the rulemaking process. But until that happens, we must move ahead. I would like to thank our witnesses for taking the time to appear before the subcommittee this morning, and I look forward to hearing what they have to say.

Mr. MINETA. Mr. Hobson.

Mr. HOBSON. No, thank you, Mr. Chairman.

Mr. MINETA. Well, Mr. Broderick, again you point to those foreign airlines that have flight duty time policies, and then you say, "Well, they're state-owned, so therefore for them it's an employment policy," I guess is what you're saying. Do those airlines that operate in those countries have employee organizations or unions that negotiate with the state in terms of those, or are those sort of like, "Now, hear this, now, hear this," and it gets imposed from top down?

Mr. BRODERICK. Most certainly, many of the countries have unions that are in fact quite strong. As you know from reading the papers about travel in Europe, there are very frequently the kinds of strikes and things that go on in many countries in Europe. South America is the same way.

So certainly I'm not an expert on labor law, but I can assure you that there are some unions that actually negotiate these things and have the power to wield contract concessions or to generate contract concessions. There's no doubt about that.

Mr. MINETA. And you've made a study of those to come to your own determination as to what our actions should be in the United States?

Mr. BRODERICK. We included our review of that in the flight time study, and the primary purpose of our review of that was to see if there were some kind of factual basis upon which these work rules were based that we could use in the balancing of safety improvement versus costs of the regulation. We found none, and we did find a wide variety of work rules not unlike if you would look at different carriers in the United States. You're looking at different countries around the world and seeing differences in the work rules that they've negotiated with their employees.

Mr. MINETA. So once those work rules are established by negotiations in the United States between an employee organization and the employer or because of the goodness of the company, you don't believe the Government should, as you said, overlay the company's safety rules?

Mr. BRODERICK. I said that the question at hand is whether or not the Government should.

Mr. MINETA. That's right. You said the Government should not overlay the company's safety rules.

Mr. BRODERICK. Right.

Mr. MINETA. I don't understand that. We have OSHA. We have Federal Labor Standards. I don't understand what you mean by that, then.

Mr. BRODERICK. We would only want to propose a regulation if we saw a benefit in terms of improving safety.

Mr. MINETA. I see.

Mr. BRODERICK. Or reduced hazard. And we don't see that, sir.

Mr. MINETA. Mr. Broderick, you're an executive manager in the FAA. Do you also have the right in terms of personnel to pick and select and to fire and hire?

Mr. BRODERICK. Yes, the normal hiring and firing authority that goes with any job.

Mr. MINETA. I see. Now, do you believe in affirmative action?

Mr. BRODERICK. Absolutely.

Mr. MINETA. And what's the cost-benefit ratio that you have found in your division in administering an affirmative action program as the Associate Administrator of the FAA?

Mr. BRODERICK. Well, when you look at women and minorities and assume that you would not use an affirmative action program to take advantage of that tremendous labor pool, you are rejecting out of hand arbitrarily and illegally resources that have made this country great.

Mr. MINETA. And what's the cost, then, of that?

Mr. BRODERICK. I think the cost is fairly trivial.

Mr. MINETA. Have you been able to define what the cost is in terms of the loss?

Mr. BRODERICK. No, I have not, sir.

Mr. MINETA. Then why is this so trivial that you don't pursue a cost-benefit ratio study as it relates to the flight duty time for flight attendants?

Mr. BRODERICK. We have, sir. We have done an extensive study of the costs.

Mr. MINETA. You have only been the repository of information that has been given to you, but you have not pursued in an affirmative manner a study to in fact determine fatigue or other factors that go into the job of a flight attendant.

Mr. BRODERICK. That is correct. We haven't seen——

Mr. MINETA. Let me ask, if I can follow up on that, it seems to me that—well, first of all, let me ask, do you consider flight attendants as safety-sensitive employees?

Mr. BRODERICK. Yes, sir.

Mr. MINETA. Then on that basis, why do you require drug testing?

Mr. BRODERICK. Because of the fact that they are safety-sensitive employees, and they must be able to function clearly, uncorrupted, if you will, by drugs. [Applause.]

Mr. MINETA. And what about fatigue?

Mr. BRODERICK. I know of no studies which show that increased fatigue will reduce their ability to perform their required safety functions. It's clear that people under the influence of drugs can't be expected to perform any reasonable function.

Mr. MINETA. Do I assume, then, that you have never worked longer than 14 hours?

Mr. BRODERICK. That would be an incorrect assumption, sir.

Mr. MINETA. And your efficiency at your job at 14 hours is not diminished as compared to at other hours that you have worked at your job?

Mr. BRODERICK. My efficiency is likely to be diminished, but my ability if I were a flight attendant to perform an emergency function is not clearly diminished at 14 versus 12 or 14 versus 16 hours.

Mr. MINETA. Then should a pilot be able to fly for 30 hours at a time?

Mr. BRODERICK. No, we limit flight time for pilots on the basis of scientific studies which have shown an inability to properly control the airplane with increasing fatigue.

Mr. MINETA. Then could you also for the record submit that as it relates to pilots?

Mr. BRODERICK. I'd be happy to submit a bibliography of information, yes, sir.

[The information received from Mr. Broderick follows:]

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Mr. MINETA. And the flight engineers?

Mr. BRODERICK. I'm not sure about flight engineers, but we'll take a look.

Mr. MINETA. Flight navigators?

Mr. BRODERICK. I'm not sure that flight navigator, dispatcher, mechanic regulations ever went through the kind of analysis that we're talking about.

Mr. MINETA. Are they not subject to duty time requirements as air traffic controllers or mechanics or dispatchers?

Mr. BRODERICK. Because of decades-old rules that existed before the requirements that were legislated to do the kind of cost-benefit tradeoffs, yes, sir. But I don't know of any studies that relate—for example, the mechanic rule is you must have one day off in seven. The dispatcher rule is you must have eight hours of rest after 10 hours of continuous duty, but then you can go right back to 10 hours of continuous duty, and one day off a week.

Mr. MINETA. And why is that standard imposed on dispatchers?

Mr. BRODERICK. It long predates my interest in aviation, sir. I'd have to research it. I'm sure that rule is at least 30 years old. Maybe even 40 or 50.

Mr. MINETA. I take it, then, that in terms of the drug testing that you are able to somehow calculate the benefits.

Mr. BRODERICK. The drug testing regulation was promulgated at the same time we had a national initiative to promulgate anti-drug regulations throughout the work force. You will remember that we did it for all modes of transportation. Yes, we did do a benefit-cost analysis. I'm not sure that it got down to the level of detail of flight attendants versus flight engineers versus pilots. I think it was self-evident to people that it was inappropriate to have people under the influence of drugs performing safety duties in the air.

Mr. MINETA. Were there accidents or injuries that had been caused by flight attendants who were on drugs?

Mr. BRODERICK. Not that I know of.

Mr. MINETA. Then why do you say that you need to have evidence of passenger injuries whether it related to fatigue before you regulate duty and rest time?

Mr. BRODERICK. I didn't say we needed and I wouldn't want to say we need injuries or a body count. I was stating for the record that there is no evidence of past injury. What I did say, Mr. Mineta, is that we don't see a safety benefit that could be achieved by limiting the already good industry practice further.

Mr. MINETA. I thought your testimony said just the opposite. Did you not say that you needed to have—after reviewing 38,000 accidents or whatever it was, did you not say that there was no justification for it?

Mr. BRODERICK. I said the record shows not a single incident where this has occurred. I don't want to imply that we need a body count. That's something that's abhorrent to me and I know to members of the subcommittee.

Mr. MINETA. Well, what are you saying?

Mr. BRODERICK. I'm saying I need to have an objective and reasonably well established relationship between the thing that we are trying to eliminate by regulation and a safety benefit. I don't see the relationship in any objective way between reduction in fatigue

and increase in the safety benefit that comes with that reduction for flight attendants. I'm not questioning the reduction in fatigue that would be associated with a reduction in duty hours.

Mr. MINETA. Well, it seems to me you came to some conclusion as it related to drug testing in the Federal Register of November 21, 1988, when you talked about the benefits.

Mr. BRODERICK. I'd have to review——

Mr. MINETA. Without, again, the kind of "body count."

Well, let me at this point yield to the chairman of the committee.

Mr. OBERSTAR [resuming chair]. Mr. Broderick, I want to review the billion dollar figure you cited. How did you come to that number? What process of analysis was achieved? What documents and records do you have in the FAA files in your now nearly two-year-long review of this subject matter? I'm sure there must be very extensive records.

Mr. BRODERICK. Well, of course, we don't have a two-year history with the review of H.R. 14, but I would be happy to——

Mr. OBERSTAR. It's been two years since we last visited this subject almost.

Mr. BRODERICK. I would be happy to supply for the record the analysis. What I specifically did was ask our economic analysis branch to look at the costs that would be associated with implementing a regulation which was drafted exactly like H.R. 14 was drafted. Their analysis resulted in an estimate in undiscounted dollars of a little over a billion dollars over the 15-year period that they analyzed.

Mr. OBERSTAR. What process of analysis did they use to—what factors did your people use to come to this number of a billion dollars?

Mr. BRODERICK. What they basically had to do was to calculate the additional number of flight attendants that would be required because of reduced duty days, the additional number of trips that would be required, the additional number of overnights, the additional training, and that kind of thing, as well as, of course, the recordkeeping that we talked about earlier, and add all that up, and as I remember the number, it was about $50 million in undiscounted dollars per year.

Mr. OBERSTAR. Do you recall a specific carrier—which you need not name, call it carrier "X"—and how many additional flight attendants it would require?

Mr. BRODERICK. No, I don't, sir.

Mr. OBERSTAR. How many for the industry?

Mr. BRODERICK. No, I don't. I'd prefer not to——

Mr. OBERSTAR. Did you call in flight attendants to get their views as you were going through this process of consideration?

Mr. BRODERICK. No, we didn't. As a matter of fact, it was an effort that was done over the last month or so, when H.R. 14 became available.

Mr. OBERSTAR. It was just done in this last month?

Mr. BRODERICK. Yes.

Mr. OBERSTAR. This isn't a year-and-a-half or two-year-long review process?

Mr. BRODERICK. No, sir.

Mr. OBERSTAR. Were industry representatives called in?

Mr. BRODERICK. Not that I know of.

Mr. OBERSTAR. Was this an internal FAA review?

Mr. BRODERICK. Yes, by the Office of Aviation Policy and Plans, I think they're called.

Mr. OBERSTAR. Was it subjected to any outside analysis of any kind?

Mr. BRODERICK. No, sir, it's the same kind of review that we would do if we were doing—well, when we did the cost analysis of our own regulation, done by the same team. People that understand the issue and how the costs are allocated in the industry.

Mr. OBERSTAR. Is this gathered all together in one document?

Mr. BRODERICK. Yes, it's actually fairly brief. It's a comparison of—I mean, it lays out what the expected additional costs are from H.R. 14.

Mr. OBERSTAR. Can you make that available to the committee today?

Mr. BRODERICK. We'd be happy to submit it for the record, sir, yes, sir.

[The information received from Mr. Broderick follows:]

U.S. Department of Transportation
Office of the Secretary of Transportation

Assistant Secretary

400 Seventh St., S.W.
Washington, D.C. 20590

March 18, 1991

The Honorable James L. Oberstar
Chairman, Subcommittee on Aviation
Committee on Public Works and Transportation
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Enclosed for your information and reference is an FAA paper analyzing the costs associated with the flight attendant duty and rest requirements set forth in H.R. 14 (Congressman Mineta's bill). Please understand that the cost estimates are rough, preliminary in nature, and based on assumptions and data that are difficult to quantify. Nevertheless, FAA's basic point is well taken--that the bill would be extremely burdensome for the airline industry.

On the benefit side, there remains no demonstrable link between present flight attendant duty schedules, fatigue that might impair performance, and passenger safety. The fact is that no quantifiable evidence exists to show that any safety benefits would accrue if H.R. 14 were enacted.

I recognize that the differing views on this matter are strongly held and would be pleased to provide you with further clarification regarding FAA's cost derivation or methodology, if desired.

Sincerely,

Galen Reser
Assistant Secretary
for Governmental Affairs

Enclosure

FLIGHT ATTENDANT DUTY PERIOD LIMITATIONS AND REST REQUIREMENTS (14 CFR PARTS 121, 125, And 135)

COST ANALYSIS OF H.R. 14

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I. REQUIREMENTS IN H.R. 14

In evaluating H.R. 14, it is useful to consider some of the major characteristics of air carrier industry practice in regard to flight attendant schedules. These characteristics include the following:

- Typical duty periods are from 8 to 12 hours long on domestic trips, and somewhat longer on international trips.
- Scheduled duty periods of more than 14 hours occur more often on international flights. Supplemental carriers tend to have a higher frequency of longer duty periods.
- Rest periods on domestic operations are usually scheduled for more than 9 hours, and rarely are less than 8 hours. Rest periods on international trips usually are scheduled for more than 12 hours; sometimes for 24 hours or more.
- Most operators provide a rest period of at least 24 hours every 7 consecutive days.
- There were approximately 83,000 flight attendants employed in the industry as of 1989, working an average of 150 days or 1,500 hours per year.

A summary of the requirements in H.R. 14 is shown in Table 1.

TABLE 1

Summary of Requirements in
H.R. 14

HOUSE BILL		
	ACTUAL DUTY	ACTUAL REST
DOMESTIC	14	10
INTERNATIONAL	16	12
LONG RANGE INTERNATIONAL	No more than 4 hours greater than scheduled duty time, 20 hours actual duty time max.	Twice the scheduled flight hours.
EVERY 7 DAYS		24 consecutive hours
CALENDAR MONTH		Eight 24 consecutive hour periods at domicile.
REST BREAK - ANY FLIGHT SCHEDULED FOR 8 OR MORE HOURS FLIGHT TIME		One continuous hour in a passenger seat

Source: FAA, AFS-240

II. COST IMPLICATIONS OF H.R. 14

This section discusses major components of H.R. 14 and their potential relative cost impacts. A detailed cost estimate follows in Section III of this document. Other provisions also may increase costs to the industry, but they are difficult to quantify at this time.

10 hours domestic rest. This provision could impose conflicts between flight attendant schedules and pilot schedules (pilots can be scheduled to receive as little as 8 hours rest). This provision also conflicts with most carriers' scheduling limitations - carriers routinely schedule domestic rest for less than 10 hours, especially on layovers.

12 hours international rest. This provision would have a small impact on transoceanic trips, which often have longer scheduled rests.

Long-range international (8 flight hours or more). This provision implies a 16-hour scheduling limitation maximum, and it would allow no more than a 4-hour difference between scheduled duty and actual duty times. This provision would have a small cost impact because most affected flights would apparently occur within 20-hour duty periods.

Deadheading as duty. This provision would have a substantial impact for three reasons: (1) it would require more day-prior positioning, (2) it would prohibit deadheading home after reaching maximum duty, and (3) it would require additional hotel bookings.

14 hours domestic duty. This provision implies a 12-hour scheduling limitation. Under this provision air carriers would be unable to increase beyond 14 hours for contingencies. This provision would have a moderate cost impact because most domestic national, regional, and major duty periods fall within 14 hours.

16 hours international duty. This provision implies a 14-hour scheduling limitation. Most major and supplemental carriers do not have an international limitation, though 16-18 hours is typical of those that do. This provision would have a moderate cost impact on major carriers. This is because most operations fall within 16 hours. This provision, however, would have a major cost impact on supplementals, which frequently go beyond 16 hours.

24 hours off per 7 days, and 8 days off per month. These two provisions would impose minimal impacts because the vast majority of air carriers are already employing such rest features.

Crew rest seats on long-range international flights. This provision would impose a cost impact to air carriers in the form of lost revenue seats that will be used by flight attendants during their rest breaks.

Recordkeeping. The Bill does not address recordkeeping, but obviously it would be necessary to monitor compliance.

III. ESTIMATED COSTS OF H.R. 14

Based on the cost implications discussed in the previous section, costs under H.R. 14 would be incurred for additional hotel stays, flight delays, staffing requirements, and positioning. Estimating costs is difficult because of the variety of methods in which carriers might respond to these requirements. In the event of unexpected delays, carriers may have to cancel flights, reschedule, or position crews. These are examples of situations in which revenue losses could be incurred by air carriers. It was noted that, during the May 1989 Congressional hearings on H.R. 638, which had similar provisions as H.R. 14, one Air Transport Association witness indicated that major carriers estimated that the bill would create a recurring annual cost per major carrier ranging from $10 million to $30 million. According to the testimony, additional flight attendants and layover costs were the major factors behind this high range of costs.

The cost estimates that follow are based on approximations of how many productive flight attendant hours in today's environment might be converted into unproductive rest hours as a result of the rest requirements of H.R. 14. Estimates are also provided for recordkeeping and crew rest seats that H.R. 14 would require carriers to provide to flight attendants for a 1-hour in-flight rest break on long-range international flights (at least 8 hours non-stop flight). These estimates do not address any other aspects of H.R. 14.

1. Total Number of Flight Attendants

Total	83,000
Estimated - Domestic (90%)	74,700
Estimated - International (10%)	8,300

2. Cost Per Domestic Rest Requirements

Major Assumptions: Each flight attendant works approximately 150 duty periods per year. A typical work schedule is three days long, including two overnight layovers away from domicile; there are approximately 100 layovers per year. One of the two overnight layovers per trip (there are about 50 layover pairings per year) may be less than the normal minimum rest of 9 hours, but rarely substantially below 8 hours. An estimate of 8.5 hours is used to represent the minimum rest under current industry practice. To arrive at a figure for duty hours that might be converted into rest hours under H.R. 14, the FAA estimates that each flight attendant has 50 rest periods per year that are, on average, 8.5 hours long, and that these would have to be increased to 10 hours. This is a total increase of 75 hours (1.5 x 50) per year per flight attendant in rest period hours. This is summarized as follows:

Estimated Duty Periods	150
Estimated Layover Rest Periods	100
Rest at 8.5 Hours	50
Increase in Rest Time (10 hrs.- 8.5 hrs. = 1.5 Hours times 50 Rest Periods)	75

Multiplied by the total number of Domestic Flight Attendants (75 hrs. x 74,700), this yields:

Additional Hours of Rest	5,602,500

Divided by estimated hours per year worked by each flight attendant (5,602,500 additional rest hours divided by 1,500 hours per year), this yields:

Additional Rest as Equivalent in Flight Attendant Years:	3,735

Additional Wages/Training Costs Per Year [3,735 additional flight attendant work years times $17,250 (annual junior salary plus recurrent training)] $64,428,750

It is unknown how much flexibility carriers would have to reschedule current employees to cover the additional duty hours. For the estimate it is assumed that half of this additional work will be done by new hires. Initial training costs of $5,000 are estimated for half of the 3,735 flight attendant work years:

Training (3,735 x .5) x $5,000	$9,337,500

3. Costs for International Rest Requirements

Estimated Duty Periods Per Year Per Flight Attendant (Same as domestic)	150
Estimated Layover Rest Periods Per Flight Attendant (Same as domestic)	100
However, minimum rest (of less than 12 hours) appears to occur less frequently on international trips. Therefore, it is estimated that a smaller proportion of rest periods would be affected, and a figure of 10 hours is used to represent the minimum rest on international trips, as follows:	
Estimated rest periods of 10 hours per flight attendant (Rest at 10 hrs.)	25
Increase in Rest Time (12 hrs. - 10 hrs. = 2 hrs., for 25 rest periods)	50
Multiplied by Total Number of International Flight Attendants (8,300 x 50), this yields:	
Additional Hours of Rest	415,000
The additional rest hours divided by 1,500 hours per flight attendant work year (415,000/1,500) yields:	
Equivalent in Flight Attendant Years	277
Based on estimated $17,250 annual junior wage plus recurrent training cost ($17,250 x 277):	
Additional Wages	$4,778,250
Assuming half of this additional work would be done by new hires (as opposed to rescheduling existing work force), training costs are estimated for half of the 277 flight attendant year equivalents.	
Training ([277 x .5] x $5,000)	$692,500

4. Recordkeeping

Although recordkeeping is not specified, it is implicit ir H.R 14. The cost bases used here, include $5 per flight attendant for one-time set up costs ($5 x [83,000 + 4,012] = $435,000). An estimated 4,012 additional flight attendants are included here.

Start-up ==========> $435,000

The recurrent recordkeeping estimate is premised on thirty seconds data entry, at $10 per hour, for a cost of $0.08333 (or 8 cents). For a total of 87,012 flight attendants. ($0.08 x 87,012 employees x 150 work days per year):

Recurrent ==========> $1,044,144

5. Reserved Seats for Flight Attendant Rest

The potential cost of this requirement would depend on how many passenger seats would be withdrawn from passenger service on fully booked flights. The FAA does not know which certificate holders, if any, do not provide rest facilities for their flight attendants or how many long-distance flights they operate, or how many aircraft they use to provide the service. As a result, the FAA cannot accurately estimate the additional cost burden that this requirement would impose. The FAA has derived an approximation using trans-Pacific flights. If the number of world-wide, long-distance flights operated by certificate holders not providing rest facilities for their flight attendants equals 5 percent of major certificate holders' scheduled Pacific operations, then the

cost to those certificate holders for blocking off passenger seats as rest facilities is estimated to be $1.3 million per year, or $10 million over the next 15 years (discounted, 1989 dollars), as follows:

Average yield per available seat	$900
Aircraft revenue departures per year	9,666
Estimated percentage of world-wide flights affected	5%
Number of seats to be blocked per flight	3
Total number of seats blocked off: (9,666 x 0.05 x 3)	1,500
Annual revenue yield loss ($900 x 1,500)	$1,350,000

6. Summary of Costs

(Non-discounted, 1989 dollars):

	Recurring	One-Time
Domestic (rest	$64,428,750	$ 9,337,500
Intern. (rest)	4,778,250	692,500
Recordkeeping	1,044,144	435,000
Rest seats	1,350,000	
Total, Annual Non-discounted:	71,601,150	10,465,000

Combined Total (Recurring and one-time), Discounted, 15 years: $554.1 million.
Discounted 1st. Year: $74.6 million.

See Appendix A to this paper for tabular breakdown of Costs for H.R. 14.

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APPENDIX A

Tabular Breakdown of the Total Costs for H.R. 14

APPENDIX A

ESTIMATED COST OF HOUSE BILL H.R. 14
(Discounted at 10%, 15 yrs., 1989 dollars)

		Recurring Cost	One-time Cost	
Flight Attendants				
Yr -1	83,000			
Estimated Domestic (90%)	74,700			
Estimated International (10%)	8,300			
(Based on revenue enplanements)				
Domestic Rest Requirements				
Per Year and Flight Attendant				
Estimated Duty Periods	150			
Estimated Layover Rest Periods	100			
(67% of Duty Periods)				
Rest at 8.3 Hours	50			
(50% of Layover Rest)				
Increase in Rest Time	75			
(1.5 Hours for 50 Rest Periods)				
All Domestic Flight Attendants				
Additional Hours of Rest	3,602,500			
Equivalent in Flight Attendant Years				
Additional Rest	3,735			
Additional Wages		$64,428,750		
(Estimate $17,250 Annually)				
Training			$9,337,500	
(Estimate $5,000 and 50% of Additional Wages to New Hires)				
International Rest Requirements				
Per Year and Flight Attendant				
Estimated Duty Periods	150			
Estimated Layover Rest Periods	100			
(67% of Duty Periods)				
Estimated Rest at 10 Hours	25			
(25% of Layover Rest)				
Increase in Rest Time	50			
(2 hours for 25 Rest Periods)				
All International Flight Attendants				
Additional Hours of Rest	415,000			
Equivalent in Flight Attendant Years				
Additional Rest	277			
Additional Wages		$4,778,250		
(Estimated $17,250 Annually)				
Training			$402,500	
(Estimate $5,000 and 50% of Additional Wages to New Hires)				
Recordkeeping				
(Implicit Requirement in H.R. 14)				
Start-up			$435,000	
Recurrent		$1,044,144		
Reserved Seats for Flight Attendant Rest				
Cost Per Flight (3 seats)	$2,700			
Cost Per Year (500 flights)		$1,350,000		
Estimated Total Cost ($71.6 million x 15)		$1,074,144,250	$10,445,000	
Discounted Cost ($71.6 million x 7.606)		$344,398,362	$ 9,723,150	⟶ $354,121,512

Mr. OBERSTAR. And for the record, then, I would call in GAO to have their objective analysis done of the FAA study, and we may subject to further review. That number seems awfully big, awfully speculative to me.

Mr. BRODERICK. Well, of course, it would be speculative, because you're projecting how an industry would react to a fairly major change in its scheduling and duty rules, but it's the best we could do without going to industry and getting a detailed review.

Mr. MINETA. Would the gentleman yield on that?

Mr. OBERSTAR. In just a moment.

You also did a cost-benefit analysis of your regulation, didn't you?

Mr. BRODERICK. Yes, sir.

Mr. OBERSTAR. It would be useful to have that document as well, if you can get that to us today. I want to see and compare the methodology used in the two cases and to analyze the basis upon which the conclusions were reached.

Mr. BRODERICK. I'd be happy to, sir.

[The information submitted by Mr. Broderick appears on page 92.]

Mr. OBERSTAR. I yield to the gentleman.

Mr. MINETA. Mr. Chairman, that was what I was going to ask about, following up on that piece of it.

Mr. HOBSON. Mr. Chairman.

Mr. OBERSTAR. I'll yield in just a moment.

We're really having a hard time with this subject. On the one hand, you're saying, "You know, we're not looking for a body count, but because there hasn't been one, we don't think there ought to be a regulation." So you really are looking for a body count, and if there were one, then you'd rush in to do something. But because there isn't one, you say that regulation isn't needed and the duty time limitations aren't needed.

You know, I've been somewhat of a student of labor history, and I cited an incident in my opening comments, one that has particularly aggravated me, having grown up in an iron ore mining country of northern Minnesota, and I think back to 1910—it took 240 years of the industrial revolution to get to an eight-hour work day. You know, it shouldn't take us 80 years after that to come to another limitation on time spent in the work place.

My father worked 26 years in an underground iron ore mine. Often times he was asked to work overtime or to double out even. After a time, he just said no, even though it meant extra money for the family. He wasn't going to do it, because when you get tired, you make mistakes, and working overtime on a double-out shift one night, some guy who was equally tired and couldn't handle a piece of pipe—about an eight-inch pipe that they were laying 600 feet underground—slipped through lack of attention to what he was doing, snapped, snapped my father's hand back, split a finger right down the middle, and broke it at the joint. He was out of work and didn't get paid for being out of work. In those days, they didn't have pay for that. Fatigue.

I can go on and give a lot of other incidents. As a young kid, I sat there listening to my father, who was chairman of the safety committee in the underground mine, talking about safety conditions that needed to be corrected.

We have an opportunity here to do something good for people—for passengers, and for those who have to work aboard the aircraft. That's their work place every bit as much as the underground mine.

The gentleman from Ohio.

Mr. HOBSON. Mr. Chairman, I just have one other request that we might ask on numbers. That was the only reason I interrupted before. I think you stated that in the bill that's proposed the rules are in excess of what those are for pilots. Is that correct?

Mr. BRODERICK. They can be, yes, sir.

Mr. HOBSON. Is there any way to look at the numbers to come back and try to coordinate as to what the cost might be if you were to assume some of the same rules that apply to pilots so you'd have some consistency between what's being asked of one and the other? I understand the jobs are different, but they are on similar type schedules, I would assume, and if you could look at those numbers at the same time, I think that might be helpful to the committee.

Mr. BRODERICK. The difficulty, of course, is that you have duty time and flight time, and you can't ever directly compare the two. If the bill were written in exactly the same way as the pilot rules were written, it would be possible to compare them, but when you compare duty time to the—I mean, duty time is essentially flight time plus time that you've got to be on the job waiting for a flight, simply stated. Flight time is only the flying part of that. So it's very difficult to compare those two.

That's one of the reasons why this regulation is expensive, because if you put a hard limit on duty time, that means a flight delayed on the ground might not be able to take off, because the duty time clock is going all the time the plane is on the ground, whereas the flight time clock for the pilot isn't moving until the pilot moves the airplane. So they're incompatible regulations fundamentally at the very root.

Mr. MINETA. Would my colleague yield on that point?

Mr. Broderick, that practice even varies from airline to airline. Some airlines count duty time from the time they come in for their briefing. Others say duty time starts when the nose rotates. So sometimes you may have a flight attendant come to work, get his or her briefing, be on the airplane, push back from the gate, taxi on out, have a mechanical, and go back to the gate, and they're duty time hasn't started yet. Is that fair?

Mr. BRODERICK. That's a fair description of what might be. Do you mean is that fair to——

Mr. MINETA. I'm not asking you about the fairness of the description, I'm asking you is it fair in terms of uniformity as to when duty time starts for one employee under one condition and another employee working for another company?

Mr. BRODERICK. That's exactly why in the discussion I had with Mr. Laughlin I pointed out the need to make these regulations uniform and the cost that would be with it. It's basically a million dollars' worth of computer time a year.

Mr. MINETA. And you don't think that the Government should overlay those kinds of company practices?

Mr. BRODERICK. Without an associated safety benefit, I don't think we have the ability to do that, sir.

Mr. MINETA. OK. That's at the beginning of the duty time. What about at the end of the duty time if that's 12, 14, 18 hours? Have you looked at that?

Mr. BRODERICK. We have looked at whether or not there is a problem that we can identify with work practices that frequently get to there, and we've concluded that they don't.

Mr. MINETA. On what basis? Because you don't have any objective information.

Mr. BRODERICK. No, on the basis of the 7,000 records that we looked at, we saw less than 2 percent of the major carriers and less than 1 percent of the national carriers, who together represent 95 percent of all the people flying, and we looked at those and said, "Gee, with that small number of times that you exceed reasonable work hours, it doesn't appear that there would be a safety benefit associated with the regulations that cost a million dollars a year."

Mr. MINETA. Mr. Broderick, last year, I think, in aviation accidents—I'd be guessing—maybe 250 people were killed. In automobile accidents, we had maybe 55,000 killed or 50,000 killed. We are not spending proportionately what we are spending in terms of aviation safety as it relates to highway—we should be spending a lot more in highway safety, but we're not, and yet we're killing 50,000 people a year. When you talk about a cost-benefit ratio, I'd like to have you explain that to me, then.

Mr. BRODERICK. Well, what we need to see is that the costs that we impose on the traveling public are accompanied by a benefit that we believe is at least equal to that value.

Mr. MINETA. Well, that's my point, though. We're spending billions in aviation safety and not even hundreds of millions in highway safety, and yet in one instance we're killing 50,000 people and in the other it may be 250 or 300 or however many. It's still less than 500.

Thank you, Mr. Chairman.

Mr. OBERSTAR. Well, the argument, if you take it to its logical conclusion that we don't see a benefit, would argue in favor of removing a number of FAA safety-related regulations, and I don't think every single one of those FAA regulations has a cost-benefit analysis backing it up.

Mr. BRODERICK. Certainly not all the ones that exist because of their age, but all the ones that we've done in modern times do, sir. We're required to by law.

Mr. OBERSTAR. Some of those that were imposed earlier were imposed simply because good, plain common sense said, "Do these things. Build redundancy in."

Mr. BRODERICK. And some of them have costs which are not matched by benefits as well, I'm sure.

Mr. OBERSTAR. If we continue to impose the cost-benefit requirement on everything that's done in the safety field, we're going to have a lot more dead people around this country in a lot of areas of transportation. Sometimes you've got to look at something and say, as your rulemaking in 1985 said, "Some benefits are not specifically quantifiable."

You know, as for the argument about the distinction between duty time and flight time, when you get on board that aircraft, whether it sits there, as Mr. Mineta said, because of a mechanical

or because of congestion on the runway or held because of air traffic control, that clock is running. That level of stress is already setting in. That level of heightened attention and effort is already there.

Your duty time doesn't start only when you've sat in your first meeting with the Administrator or with your fellow Associate Administrators. Your duty time starts when you walk in the FAA building. Already there's a certain quickened step, quickened heart beat, a heightened sense of attention to duty upon you.

Thank you very much for being with us. We look forward to getting that material today that we requested, because I think we want to begin the analysis promptly. We do mean to move on this legislation.

The committee will take a brief recess for this vote and then return with our next panel.

[Recess.]

Mr. OBERSTAR. The subcommittee will come to order and resume our sitting on testimony related to H.R. 14.

Our next panel consists of Cheryle Leon, President of the Association of Professional Flight Attendants; Ms. Erin McKee, flight attendant for a national carrier; Charlene Oshiro Yamagata, a flight attendant for a national carrier and an associate here.

Ms. Leon, would you begin and introduce your associate?

TESTIMONY OF CHERYLE A. LEON, PRESIDENT, ASSOCIATION OF PROFESSIONAL FLIGHT ATTENDANTS, ACCOMPANIED BY VICTORIA L. FRANKOVICH, PRESIDENT OF IFFA, REPRESENTING TWA FLIGHT ATTENDANTS; ERIN McKEE, A FLIGHT ATTENDANT FOR A NATIONAL CARRIER; AND CHARLENE OSHIRO YAMAGATA, A FLIGHT ATTENDANT FOR A NATIONAL CARRIER

Ms. LEON. Yes, Ms. Vicki Frankovich, representing the TWA flight attendants, is also here. She is the President of IFFA.

Chairman Oberstar, members of the subcommittee, thank you for this opportunity to testify at this important hearing on flight attendant duty time limitations and minimum rest requirements.

My name is Cheryle Leon, and I am the President of the Association of Professional Flight Attendants. I am here today on behalf of the Coalition of Flight Attendant Unions, an alliance representing over 70,000 flight attendants working to promote passenger safety and flight attendant occupational health through safe, healthy, and reasonable hours of work and rest for flight attendants.

As you are aware, there are still no regulations governing the hours of work or rest for flight attendants. In the interest of providing flight attendants with safer, healthier jobs, increasing safety for the traveling public, and fostering equal protection under the law for this segment of American workers, we urge you to support H.R. 14.

The Federal Aviation Act of 1958 authorizes the Federal Aviation Administration—and indeed requires the FAA—in the interest of safety to write rules and regulations governing the maximum hours for periods of service for airmen and other employees of air carriers. Further, the FAA has claimed jurisdiction over and re-

sponsibility for the occupational safety and health of all crew members.

Despite its mandate and jurisdictional claims, the FAA has failed to set duty time limits or rest period requirements for flight attendants. Those FAA duty and rest limits which do exist apply only to the predominantly male employee groups of air carriers, i.e., pilots, flight engineers, and dispatchers. Historically, such disparate rulemaking has discriminated against flight attendants, a predominantly female work force.

It is interesting to note the Department of Transportation's lengthy history of mandating duty and rest limits for rail employees.

Flight attendants are also not covered by section 7 of the Fair Labor Standards Act or the active protections of the Occupational Safety and Health Administration; thus, there are no protections for this group of employees or legal penalties for a carrier that schedules flight attendants for an excessive number of hours. The direct result of this lack of protections and disparity in the treatment of flight attendants is abusive scheduling that threatens the health of flight attendants and the safety of the millions of Americans who fly each year.

I would now like to give a brief history of our lengthy struggle to secure reasonable duty time and rest rules for flight attendants. In April 1978, and then again in January 1980, the Federal Aviation Administration wrote letters which promised that such limitations would be issued by "the end of the year." Testimony presented before this subcommittee in August 1980 by the flight attendant unions refers to the FAA considering flight attendant duty time limitations back in the early 1960s. In 1984 and 1985, when no rule had been issued, the unions petitioned the FAA to make rules.

While waiting for a decision on the petitions and to assist the FAA in its decisionmaking process, flight attendant leaders representing over 25 carriers ranging from major carriers to regional carriers worked closely to study industry practice and working conditions of flight attendants. All available literature, contracts, existing international standards, and relevant economic considerations were reviewed, and detailed analysis resulted.

From this analysis, the duty time and rest parameters now found in H.R. 14 developed. Unbelievably, in January 1989, the FAA denied the petition, and during the same month, Congressman Norman Mineta and Senator Daniel Inouye introduced legislation that directed the FAA to write rules or the rules contained in the legislation would take effect. In May of that year, this subcommittee held hearings concerning duty time limitations. During that hearing, the FAA agreed to collect data to determine whether there was indeed a problem with flight attendant fatigue and long duty days.

It is important to point out the absurdity that the same agency—the FAA—that said in January 1989 in response to the petition that there was no evidence of flight attendant fatigue and therefore no need for duty or rest time regulations only five months later admitted before this subcommittee that a problem could exist and started its research.

The FAA spent the summer of 1989 collecting information voluntarily provided to the agency by selected U.S. carriers. Each carrier chose the type of information to provide to the FAA. We believe this research technique underestimated the total number of fatigue incidents suffered by flight attendants that nonetheless demonstrated the existence of serious problems. Despite the fact that the airlines were able to choose the data submitted to the FAA, when the report was released at the end of the summer, it found widespread flight attendant duty and rest problems.

The report looked in detail at schedules at only five major carriers but found at least 74 cases of domestic duty hours in excess of a 14-hour limit. The data on the regional carrier showed 140 cases in excess of the same domestic limit. In total, the report found over 200 cases in excess of the 14-hour limit at only 12 major and regional carriers. This collection even revealed instances of flight attendants on duty in excess of 20 hours. These exceptionally long days occurred more often at non-union charter carriers, yet, as I just stated, there were many instances of lengthy duty days at the major and regional carriers as well.

In our view, 200 cases of 200 fatigued flight attendants potentially affecting the safety of thousands of their passengers is a serious safety problem, and the theory that excessive duty days are a rare or infrequent occurrence has been discredited. This is particularly true since the report only covers voluntarily supplied information from a small sample of the carriers.

The report also showed that some two dozen countries, including those with advanced regulatory schemes and those with regulatory schemes generally considered less advanced than ours, have already acknowledged that flight attendant duty time and rest are important safety issues by promulgating rules to govern them. Unlike the United States, these countries do not maintain a double standard whereby dispatchers, controllers, and pilots have rest rules and the flight attendants do not.

In the Coalition of Flight Attendants' review of the foreign countries studied by the FAA, we found 17 foreign countries have flight attendant certification, licensing, or duty time regulations. While some of the countries allowed as few as 12 hours on duty, the most common was 14 hours maximum duty for domestic and international flying. Clearly, the U.S., which takes great pride in being the leader in world-wide civil aviation, falls far behind many countries in addressing the importance of the flight attendant's role as a safety professional.

The FAA's report also identified serious problems in the area of rest. The agency, arbitrarily using eight hours of rest as a guideline, found over 100 cases at 11 carriers where rest periods were less than eight hours. An eight-hour rest period usually provides a maximum of four to five hours of sleep. The Coalition of Flight Attendants union strongly believes four to five hours of sleep is unacceptable. Thus, the FAA's own study established that there is a serious industry-wide problem of inadequate rest at the carriers. Short rest periods are particularly fatiguing when sandwiched between long duty periods.

Our review of the regulations showed many other countries required the 10 hours of minimum rest be at the hotel. This is in con-

trast to H.R. 14's definition that the 10 hours of rest is time away from work, which includes leaving the aircraft, transportation to and from the hotel, and hotel check-in. H.R. 14 requires a minimum rest requirement of 10 hours on domestic and 12 hours on international flights.

It is interesting to note that the report also found several foreign countries far ahead of the U.S. rest standards as well. Some of these countries impose specific restrictions on what a rest period or a day off must include.

In addition to the foreign countries responding to the FAA, key public health officials and researchers commissioned by the Japan Federation of Cabin Attendants issued a preliminary study in November 1989 on flight attendant duty time. It found the union's recommendation of 13 hours of maximum duty and 12 hours of rest to be reasonable or, in some cases, a little reserved. The study went on to say, "We can easily estimate that there are serious problems concerning fatigue among these air cabin attendants." While Japan is well known for its keen sensitivity to employee productivity, it does not find that compatible with reasonable employee protections.

In the final analysis of the FAA's report, the debate over duty time should not be over whether there are several hundred, several thousand, or tens of thousands of abuses each year. The debate should center on whether the agency will finally rectify its disparate treatment after two decades of delay and admit that flight attendants are important safety professionals who deserve the same kind of duty limits that the FAA now provides pilots, controllers, and dispatchers. This approach would be far more consistent with the FAA's mandate to prevent aviation safety and health problems before they occur than the current illogical one.

The FAA has repeatedly failed over the last 13 years to issue proposed rulemaking for flight attendants. We think it is important to share with the subcommittee that we are not alone in the fight for improved duty time limitations. In June 1990, the Air Line Pilots Association petitioned the FAA to amend the Federal air regulations to reflect a maximum 14 hours on duty for pilots with a minimum of 10 hours of rest.

The National Aeronautics and Space Administration and other studies cited in ALPA's petition that the length of duty time is a better method for judging fatigue than actual flight time, which is the basis of the pilots' current FARs. According to this petition, Dr. John Lawver, member, National Transportation Safety Board, in remarks before the second annual meeting of the Association of Professional Sleep Society, stated that "There are some serious shortcomings in the substance and enforcement of regulations governing crew member duty and rest." H.R. 14 corrects these shortcomings.

The bill before you today is similar to the legislation considered by this subcommittee during the 101st Congress. It requires the DOT to initiate a rulemaking proceeding to establish limitations on duty time for flight attendants, including minimum rest requirements. H.R. 14 requires a maximum of 14 hours of actual duty and a minimum of at least 10 consecutive hours of rest after each duty period on domestic flights and a maximum of 16 hours of actual

duty time and a minimum of at least 12 hours of rest after each duty period on an international flight. The bill also contains other work/rest parameters.

The only major change in H.R. 14 from the last session's bill is one which mandates the DOT issuance of final rules not later than 240 days after the date of enactment and also mandates that the final regulations must establish the duty time limitations and rest requirements outlined within the bill.

The FAA and DOT have promised year after year to provide the necessary protections for this work force but have failed to do so. Now is the time for action. We support Congressman Mineta's decision to require the Department to issue those specific requirements found in his bill.

Mr. Chairman, members of the subcommittee, I would like to again point out the irony of allowing flight attendants to be on duty for 25 hours in a row while at the same time requiring them to be randomly drug tested to find out if they are taking sedatives that might make them drowsy. This is not good government, and it is not sound safety policy. We urge the subcommittee to act swiftly on H.R. 14.

Thank you again for this opportunity to testify. I will be happy to answer any questions.

Mr. OBERSTAR. Thank you for your presentation and for your very thorough review of the subject matter.

Next is Ms. McKee.

Ms. MCKEE. Good morning, Mr. Chairman and members of the subcommittee.

My name is Erin McKee. I have been a flight attendant for seven years and currently work for a national carrier. I am a member of the Association of Flight Attendants AFL-CIO and serve on AFA's negotiating committee for my carrier. We are presently negotiating for our first contract.

I enjoy my work as a flight attendant and have chosen it as my career. Lately, though, as I fly excessively long trips with little rest, I wonder if I made the right decision because of the effect the long duty days have had on my health. I am here today to testify about the serious need to limit flight attendant duty time and guarantee rest time.

In preparing my testimony, I spoke to a number of colleagues and asked them to describe trips they had flown recently and during their career. I was appalled at what I heard. Flight attendants at my carrier are flying horribly long trips and getting little to no rest in between. We are exhausted and in desperate need for Federal regulations concerning flight attendant duty time and rest.

Let me take some time to describe a few of these trips. I would like to point out that these trips are not freak exceptions. We are flying these trips routinely. It is not uncommon for us to fly 20- or even 30-hour duty periods with little to no rest. In fact, I had a hard time deciding which trips to use for this testimony; there were just too many long ones to choose from.

Let me begin by describing the many tasks that fill a flight attendant's work day. We check in two hours prior to departure. From the moment we board a flight, we put away our baggage, perform our pre-flight check of the emergency equipment, inspect the

cabin for anything suspicious like an unattended bag that could possibly contain explosives, check the cabin for cleanliness, broken seats and seatback trays, inspect the catering supplies, and stock the beverage cart.

When the almost 500 passengers begin to board, we welcome the passengers, assist them in locating their seats, give special attention to unaccompanied minors and other passengers needing special help, reconcile double seat assignments, help passengers properly store their carry-on baggage, answer their questions, and provide pre-departure service to first class passengers.

At departure, we make certain the passenger count is accurate, check that the door is properly closed, make sure all passengers are in their seats, perform our safety demonstration, do a final run-through of the cabin to check seatbelts and carry-on baggage, secure the overhead storage bins, and sit down in our jump seats.

During the flight, we talk to passengers and answer their questions, prepare and serve beverages and food, help sick passengers, and constantly check the aircraft environment so we are ready for an emergency. Finally, we prepare the galley and passengers for landing, and once the plane is at the gate, help passengers gather their belongings and deplane.

There is no time to rest or relax. We must be alert and attentive to each of the 480 passengers we serve. Even when we are on the ground in the plane holding passengers, many of these tasks must be completed.

When we get a layover in a hotel, it is rarely adequate. The time we have to rest is reduced by the time it takes to check out of that trip and leave the airport, travel to and from the hotel, which can take anywhere from minutes to hours, check into the hotel, eat, shower, rest or sleep, and then get ready to return to the airport for the next day's work. Usually, we have less than seven or eight hours to sleep during a 12-hour layover. In addition, we are usually staying at hotels near the airports, so our sleep is interrupted by the sound of planes landing or taking off.

And to make matters worse, at my carrier, we only get single rooms if the hotel room rate is less than $60. If it is over $60 or if the company has not reserved enough rooms, we must share a room with our colleagues. We are often kept up by a roommate smoking, coughing, and snoring. Rarely do we get a chance to relax, unwind, and sleep in privacy.

Now, with the work of the flight attendant and the so-called rest of the flight attendant in mind, let me describe a few trips. Some of the trips we fly look fine on paper. Trips get longer when we are faced with weather delays, added stops, staffing shortages, and mechanical problems. A recent trip I flew was scheduled to go from Columbus, Georgia, to Bangor, Maine, and on to Brussels, Belgium. Instead, it went from Columbus to Columbia, South Carolina, to Bangor, and ended in Gander, Newfoundland. It took 21 hours despite the fact that the actual flight time between these points was only four and a half hours.

First, the crew learned in Columbus that there would be an additional stop in South Carolina. The flight was delayed on the ground in South Carolina with passengers on board for four hours. During this time, the flight attendants were required to remain with these

delayed passengers to answer questions, serve refreshments and meals, and continue our safety duties.

While in South Carolina, a maintenance worker unfamiliar with the 747 put too much fuel in the plane, and the next fuel stop was changed from Bangor to Gander. During takeoff in Columbia, a large bird was ingested in the engine. The crew was informed in Gander by the flight engineer that the flight could not continue to Brussels. The company began to make hotel and transportation arrangements for the passengers and flight attendants.

Because of a storm in Gander, the regular vehicle was not available to transport the passengers to Customs, and the flight attendants were forced to deplane 400 passengers using a bus that seated only 40 people. It took 10 hours to get the passengers off the plane. Needless to say, the flight attendants were on board during this entire process and until the last passenger was transported to the terminal.

Last week, another colleague left her home in New York for the beginning of a nine-day work week which would include military personnel. The first several work days were relatively smooth. They included 9-, 10-, and 12-hour duty days with short rest periods in between.

On the sixth work day, the trip turned into a nightmare. After five days of flying, the longest and most difficult part was still ahead of the crew. She worked from San Bernardino, California, to Savannah, Georgia, with military troops. Due to poor company planning, she then had to deadhead from Savannah to Brussels. In Brussels, she flew an empty plane to Saudi Arabia. Although the plane did not carry any passengers, she was responsible for cockpit duty and cabin checks.

The crew picked up troops in Saudi Arabia and flew back to Brussels. They were then scheduled to get a rest period. She and the rest of the flight attendants were tired; they had no sleep or showers. She told me she was especially embarrassed to fly the troops in her exhausted state and apologized in advance to the troop commander for not being able to provide the best service.

She should not have been flying that trip. They had been on duty too long. The trip ended after a 53-hour layover in Brussels and then back to New York. I am certain that some of you are thinking that 53 hours in Brussels does not sound all that bad. Let me assure you that after a nightmare trip such as this one, all you would be capable of doing for much of those 53 hours is sleeping.

The sixth day of the trip was actually scheduled by the company for over 38 hours on duty. The long duty day was not due to air traffic control holds, mechanical problems, or bad weather. It was scheduled for 38 hours and could have gotten longer.

I know that when I work excessively long trips like this one, I feel helpless. When you are in your jump seat, you are so exhausted that you begin to nod off right in front of the passengers who depend on you for their safety and expect you to be alert during an emergency. It is embarrassing, scary, and frustrating.

Another colleague of mine recently worked a trip that could go into the Guinness Book of World Records. Again, I would like to stress that these excessively long trips are not rare. While I outline

the trip, please try to put yourself in his shoes and imagine just how tired you would be after working a trip like this.

He left his home in New York on September 14 and flew on a commercial carrier to Los Angeles, California—six hours of flight time. He was then transported by ground to San Bernardino, California—two hours in a van. He was in a hotel for approximately three hours when he received a call from the company that the troops he was supposed to meet in San Bernardino were actually in Kentucky.

He then boarded another van and returned to Los Angeles—two hours. After waiting in the airport for four hours, he flew a commercial flight to Dallas, Texas, and then on to Nashville, Tennessee—five hours total time. He was then driven to Hopkinsville, Kentucky—one hour in a van—and after 20 hours of travel with only three hours of rest in San Bernardino had another three-hour rest in a hotel. He had been on duty for 26 hours before he worked his first passenger flight.

He then flew from Hopkinsville to Bangor, Maine—two and a half hours of flight time—to Rome, Italy—seven hours of flight time. In Rome, the crew had almost a 21-hour layover, which actually gave them about 16 hours in a hotel. The crew shared rooms and took turns in the shower. From Rome, they were on duty from Istanbul, Turkey—almost two hours of flight time—to Amman, Jordan—over two hours of flight time. In between these flights were many additional hours of duty time, hundreds of passengers, and little sleep.

In Jordan, he had a two-day layover. Before returning to New York, he worked two more duty days, both scheduled for over 18 hours. This is an exhausting trip. No one should be expected to work for this long without adequate sleep, and again, this trip did not run into any unforeseen, unscheduled delays. It was scheduled by the company to be this long.

I would like to point out to the members of the subcommittee that this flight attendant was only paid for 32 hours, because the company would not count the ground transportation time that they scheduled for him to and from Los Angeles as duty time.

I hope these examples show how important it is to regulate flight attendant duty time and rest requirements. My company is concerned with whether or not I wear lipstick; the FAA comes on the airplane to check my manual for revisions; the Government tests me for drugs, but so far no one has been concerned that I might be so exhausted that I would be unable to open an exit and evacuate an airplane.

I understand that this may add to the cost of an airline's operation, but I personally don't feel that a company's profit should be at the expense of my health and the safety of my passengers.

Without this legislation, my company and others will continue to schedule us not for 14- and 16-hour duty days, but for 30- and 40-hour duty days. I believe I can speak for all the flight attendants at my carrier in urging you to pass H.R. 14. Passing this legislation is in the best interest of both flight attendants and the safety of the flying public like yourselves.

I am pleased to have had this opportunity to testify before you and welcome any questions from the members. Thank you.

Mr. OBERSTAR. Thank you very much, Ms. McKee, for that presentation.

Ms. Yamagata.

Ms. YAMAGATA. Good morning, Mr. Chairman and members of the subcommittee. Thank you for this opportunity to testify before you today.

My name is Charlene Oshiro Yamagata. I have been a flight attendant for a national airline for 21 years. I have also served as the Association of Flight Attendants' safety and health chairperson representing the flight attendants at my carrier for seven years. As chairperson, I hear from flight attendants on a regular basis about excessively long duty days with little rest. I am pleased to be here today to discuss the problem of flight attendant duty time limitations, since I believe it is a major safety concern at my carrier.

During my years of working as a flight attendant, I have seen tremendous changes in the airline industry at my carrier and especially in the deteriorating working condition of the employees, particularly the flight attendants. Twenty-one years ago, I worked full time as a flight attendant and attended graduate school full time as well. I worked 11, half-hour days, 10 to 11 days a month, and had 19 to 20 days off. This gave me plenty of time to rest between trips as well as study and attend classes. Flying was not that fatiguing when our work days were shorter and the rest more frequent.

Since deregulation, the flying has become treacherous. Today we are paid less, work harder and longer, and enjoy less time off. Going to school would be difficult today, since flight attendants just do not have the time or energy. On an average day, a flight attendant at my carrier will fly between nine to 10 short flights. This means she or he will check the correct storage of carry-on bags 28 times a day, give announcements 30 times a day, check that seatbelts are fastened over 2,000 times a day, take off and land about 20 times a day, interact with about 1,350 customers, serve and clean up 1,350 cartons of juice, coffee, or cocktails, set up and break down the beverage service 20 times a day, count money and tidy up the airplane 10 times, all while finding the time to smile, be pleasant and helpful. If you think this is exhausting, it is!

Even these responsibilities like preparing the cabin for takeoff and landing, checking for oversized and improperly stowed carry-on bags, and giving safety announcements are important safety-related tasks. Now add these tasks to the other crucial safety responsibilities a flight attendant must perform, and the job becomes momentous. If all we were responsible for was passing out pillows, then while 40 hours on duty would be exceptionally long, it would serve no safety consequence.

However, flight attendants are safety professionals, and passengers rely on us for leadership. We must be alert for oversized and improperly stowed carry-on bags, we must react with split-second timing to provide an ailing passenger with oxygen or perform CPR, we must be able to help an unaccompanied child secure her or his oxygen mask and calm their fear in an explosive decompression, or be keenly aware of the smell of smoke and fight a fire before it rages uncontrollably.

Flight attendants must constantly be aware of their surroundings. We must be alert for possible terrorists or hijackers, we must listen for the high-pitched hiss which might turn into an explosive decompression, or sense the shaking which might indicate a damaged tail. Our main concern is the passengers' safety.

We are the employee who knows what to do when a plane lands in the middle of the ocean. We are the ones who will get the rafts out, inflated, assist people into the rafts, and care for those who may be injured in the process. There are countless safety duties which the fatigued body and mind must be on the alert for. Like the air traffic controller or pilot, we cannot let our guard down for even a moment.

Flight attendants must be well rested and alert to perform their job responsibilities optimally. Recently, I spoke to a colleague who described the following trip. She worked from Fort Lauderdale, Florida, to Niagara Falls, New York, and then was released from duty to go home. Two hours later, she was called to report back to the airport because the carrier was short the required number of flight attendants. She then flew from Niagara Falls to Fort Lauderdale to Lincoln, Nebraska, back to Fort Lauderdale, then to Niagara Falls. She had worked four hours with two hours of rest and then another 14 hours.

This was not the end of her day, though. The next flight was also short of staff, and since she was already at the airport, the company assigned her to do another round trip from Niagara Falls to Fort Lauderdale to Lincoln to Fort Lauderdale, then back to Niagara Falls. As the clock was hitting her 35th hour of continuous duty and her 12th landing, she sat on her jump seat, barely able to sit upright, and thought, "I don't think I have enough energy to open this escape door. I think I'm going to die with this plane if something happens."

While this is an amazingly long duty day, it and other days just like it happen far too frequently to flight attendants. If flight attendants are not intentionally scheduled for long days, our work days become longer due to mechanical delays. While a 12-hour work day with a 12-hour rest period followed by another 12-hour trip is within the guidelines of our contract, the flight attendants are often subjected to longer duty days as a result of unanticipated delays.

For example, a flight is delayed six hours even before it departs. This lengthens the actual duty day as well as reduces the rest period. The flight attendant, now with only six hours of rest, uses much of this time waiting for ground transportation traveling to and from the airport, checking into the hotel, and eating. In the end, she or he will be lucky if she or he gets two hours of sleep out of the six-hour rest period.

Reduced rest periods bring to mind another story at my carrier pertaining to a charter from Honolulu to Subic Bay, Philippines, and back to Honolulu. Due to a delay, the captain told the flight attendants they were not going to receive their nine hours of crew rest and would in fact get only five hours. It took almost three hours for the crew to clear Customs and an hour by ground transportation to get to the company-arranged military rooming quarters. That left two hours for rest.

At the quarters, the flight attendants and one pilot learned that there was only one room available and that they would all have to share that room. When they got to the room, they found one bed in the bedroom and no furniture in the living room. The pilot took the bed, and the flight attendants went without sleep. By the end of the return trip home, the flight attendants had worked 33 hours and 15 minutes without sleep.

At my carrier, we have a negotiated contract which gives crew schedulers the parameters for a maximum on duty and how much time we must receive afterwards. Unfortunately, in the real world, contracts can be broken and often are. The "needs of service" always supersede what has been negotiated. Flight attendants who are forced to work long hours or rest less have a number of undesirable recourses. The flight attendants can simply refuse to take a flight, yet if they protest, they are faced with harassment and discrimination by the schedulers, suspension, intimidation, charges of insubordination, or the threat of termination by management.

The company can also "declare an emergency," which means the flight attendant cannot refuse the flight. Or when faced with a trip that stretches the contract's parameters, the flight attendant can file a grievance. A flight attendant who does file a grievance will most likely spend the next year of his or her life waiting for a decision. Meanwhile, the flight attendant has no recourse but to work the long hours. Day in and day out, the flight attendants must live with overzealous schedulers.

When a victorious decision for the flight attendant finally comes down through the grievance process, the company may change its practice for a while. The problem, however, is not permanently resolved. As we have experienced, management falls back into the same bad habits weeks after a decision. Thus, it becomes an endless process of filing grievances over and over again.

I am not here today to complain about my career choice. After 21 years, I obviously love my job. I am here to appeal to Congress to help set flight attendant duty time limit guidelines. My primary function on an airplane is safety. Filing a grievance is insignificant if, during a long work period, I endanger the lives of the passengers because I failed to close a door properly or am too tired to notice a passenger who has stopped breathing. Safety is paramount.

The carriers may say that setting such regulations would cost too much money and cause too many changes in their schedules, yet I wonder, if the carriers are presently scheduling limited pilot work hours and providing them with rest, how difficult could it be for them to do the same for flight attendants? If the companies can plan ahead to have pilot replacements available at airports, they can certainly plan ahead to have flight attendant replacements available, too. The carriers' present inability to replace fatigued or sick flight attendants clearly shows the difference between those employees who have Federally mandated maximums and minimums and those who do not.

I would like to conclude my testimony by describing a trip which I believe exemplifies why this country needs flight attendant duty and rest time regulations. A colleague recently worked a 33-and-a-half-hour duty day and described the trip to me. She was supposed to leave Seattle, Washington, at 4:14 in the afternoon, but the

flight was delayed until 3:30 in the morning, as an aircraft part was being flown in from Vancouver, Canada.

During this time, the crew boarded and deplaned the passengers twice. The flight attendants stayed on the plane the entire 11 hours. They finally flew from Seattle to Frankfurt, which is a ten-and-a-half-hour flight. This crew had been on duty 21 hours at that point, and while the pilots were replaced in Frankfurt, Germany, the flight attendants traveled on.

From Frankfurt, they went to Zurich, Switzerland, but the flight was so late that it had missed the landing curfew and was diverted to Basel, Switzerland. Arriving at midnight, the flight attendants were given a five-hour break at the hotel, which allowed them to sleep for all of about three hours. At 6:00 in the morning on the return trip to Zurich, during takeoff there was a loud explosion, and the takeoff was aborted. The fatigued flight attendants froze. Only one of the flight attendants reacted quickly and assessed the situation. The other flight attendants were so tired that their reaction time was slowed at this critical moment.

The plane returned to the gate, and after it was determined that there was nothing wrong with the engines, that they had just backfired, the flight continued to Zurich. By the end of the trip, the flight attendants had been on duty 33 and a half hours.

Flight attendants should not need to bite their lips to stay awake or need to drink their 10th cup of strong coffee to clear a foggy head. The issue here is safety for the flight attendants and primarily for the passengers. We must have Federal guidelines for duty times and rest times.

Members of the subcommittee, the next time a plane carrying your family members has a malfunction or prepares for an emergency landing, I hope that the flight attendants on board will be in the mental and physical condition to save lives. After all, it will be their leadership which the passengers will rely on and their voice commands to direct them to an open door. For this reason, flight attendants need to be awake and alert.

I would just like to add the following observation. When Congressman Clinger asked the FAA if it would support any bill, the FAA said, "No, since there was only a small fraction of cases over 14 hours." If that is the case, then where does the FAA's $1 billion of cost come from? In addition, the FAA states it will cost millions to the carriers to keep records on duty time hours, but for pay purposes it's already being done at my carrier, so it will in truth cost nothing.

I appeal to you to pass Congressman Mineta's legislation to regulate duty time and rest periods. Please support H.R. 14. I will be happy to answer any questions you may have. Thank you.

Mr. OBERSTAR. Thank you very much for your presentation, and thanks to all the members of the panel. You have provided us certainly compelling stories and cases of violations and abuses of duty and flight time, and I could only think about the two cases you cited, Ms. Yamagata, about 33-hour flights and wish that Mr. Broderick had been a flight attendant on one of those flights. [Laughter.]

Could you distinguish for me duty time and flight time, since the FAA made quite an issue of that subject? Whoever wants to address the subject.

Ms. LEON. I'll be glad to address that. Flight time is the actual hours in the air one would be flying. At certain carriers, duty time will include the hour, two hours you sign in before you ever reach the aircraft for pay purposes. At other carriers, it does not. Duty time is the time you report for work until you are finished for the day.

Mr. OBERSTAR. Does duty time vary from carrier to carrier? Is there a different practice at each one?

Ms. LEON. I know from the unionized carriers that there are different duty limitations, and I can't speak for non-union carriers. I have heard stories of duty days of 18 to 20 hours, and at charter airlines the same type of practice.

Mr. OBERSTAR. What is the significance of the commute at the beginning of a duty day that Mr. Broderick referred to? He says that shouldn't be counted, that's not part of your responsibilities and shouldn't be factored into the total calculation of time spent at work.

Ms. FRANKOVICH. If I can address that, it is not, and I don't know of any industry that regulates what employees do on their own time. It is a woeful excuse by the Government, whose job it is to protect the citizens of this country and the workers of this country, to use as an excuse for a reason not to regulate this industry and this job that it may well be that on our own time we may not get sufficient rest. That has nothing to do with the issue, it had nothing to do with looking at whether or not the citizens of this country should have an eight-hour day, it had nothing to do with whether or not the pilots should have limitations or the mechanics or any of those other people who we've already talked about.

Mr. OBERSTAR. Do any others have a comment on that?

[No response.]

Mr. OBERSTAR. All of these issues really raise the question of negotiation, if you will, between the employee and management to regulate the time that one has to spend in flight or on duty. In those cases where there is actually a labor contract, isn't that contract sufficient to protect you? Can't the union negotiate a good agreement that will limit duty and flight time to that 14-hour element? Or what factors are negotiated into such contracts to perhaps extend the time or impose additional duty time responsibilities?

Ms. LEON. At American, we have been able to negotiate very closely what is contained in H.R. 14. I would say that when you look at some of the foreign country duty time limitations, Yugoslavia has a better duty time and rest period than we even do, which is negotiated with American, and I would say our contract is probably one of the best in the industry.

I would like to say, though, speaking of unionized carriers, when I started flying in 1966, we had a contract on the property. I dare say I didn't even know it existed. I didn't care. It was a very glamorous job. I didn't care how long I flew. I also thought I'd only be there two years at maximum.

As you know, Civil Rights changes came along, Title VII came along, and it dramatically changed our profession. I dare say that that cost the carriers a lot of money. I find it incredible that in 1991 we're here before you really asking for a rest period just to be humane.

Mr. OBERSTAR. Well, I find this whole issue 80 years behind the times of the industrial revolution and changes in the industrial work place. As I said earlier, I just can't understand the FAA and the way they've managed this subject.

You've also talked about a nine-day work week in many instances, particularly in international flights. What are the, again, perhaps intangible but nonetheless real and demonstrable cumulative effects of fatigue as you change time zones?

Ms. FRANKOVICH. I think there are any number of studies that deal with circadian rhythms and the problems of the body, and they usually do not focus on flight attendants, but they focus on passengers. I would dare say that studies that deal with passengers and studies that deal with pilots also must apply to flight attendants, who are not on automatic and who are not robots. Those studies clearly point out that there's some good amount of time after the crossing of time zones that's required to recover normal bodily functions, and those repeated crossings are physically wearing.

I think as most of us at this table have already been in this job longer than two years, we can testify as to the adverse physical effects that the repeated crossing of time zones would have, and I would dare say any of you who likewise do somewhere near the amount of traveling that many of us do might also, just from a common experience basis, be able to testify to that same issue.

I would like to refer back to a previous question, though, as well, on the issue of whether or not it is possible with a union on the property to negotiate those protections that are necessary. We wouldn't be here at this table today asking for our Government to help us if we had been able to achieve that goal.

And beyond that, I am sorry to say that not every flight attendant in this industry is fortunate enough to be a union member, and if in fact this great Government of ours and this great country that we live in cannot provide us with the same protections that the government of Yugoslavia or the government of Brazil or the government of Chile or the list that we could go through provides for their flight attendants, we are really in a terrible, terrible plight. That's my comment on that issue.

Mr. OBERSTAR. Of course, Mr. Broderick, in a rather specious argument, dismissed the regulations of other countries, saying, "Well, they were imposed by the government, and therefore they don't count." I find that stunning.

Ms. Yamagata, you had a comment?

Ms. YAMAGATA. Yes, regarding contracts. My carrier has been able to negotiate protection for flight attendants on duty times and rest times. Even though we have a contract and we have done it at the collective bargaining table under the union democratic process, we still have no protection, because the company chooses to break the contract, as I have stated in my testimony. We file grievance after grievance, and this has been ongoing for six years. We desperately need H.R. 14 to pass.

In addition, I'd like to note that the pilots do not need to negotiate protection in their contract, because they have it by federal regulation.

Regarding circadian rhythm, I would like to point out that we have been able to get into our contract a diurnal clause which the company insisted that we should have. This clause states that from 2:00 p.m. to 4:00 a.m., the company feels that flight attendants are flying the back side of the clock, which makes us that much more tired and fatigued, so they wanted us to have 18 hours of rest. But in the real world, when you're in Europe and there are no replacements, 18 hours is of no value to the flight attendant, because we just continue on with the plane, because at the next destination, the people are there waiting to be transported to yet another destination.

Just before leaving Honolulu, I got to speak to a colleague who told me about a 68-hour incredible trip with five hours of rest. Sixty-eight hours is almost three days.

Mr. OBERSTAR. That's unbelievable.

Ms. YAMAGATA. Yes, it is unbelievable. It's very commonplace.

Mr. OBERSTAR. It's inhumane.

I have a few other questions I'd like to pose later on, but I want to yield to others.

Mr. Clinger.

Mr. CLINGER. Thank you very much, Mr. Chairman.

I thank the panel for their very enlightening testimony this morning.

When we held this hearing a year or so ago, some of your senior colleagues were opposed to the legislation on the grounds that it would make things too rigid. In other words, applying a sort of industry-wide set of rules would be inhibiting and would seriously interfere with their ability to schedule their times. Is that still a problem, or do you see that as a problem? Is there some reason why that should be taken into account? Is this too rigid?

Ms. FRANKOVICH. We would say no. We're here to say no. We think the people who said that before are far, far, far in the minority of the people represented at this table.

Mr. CLINGER. These were all senior flight attendants, I gather, who have more choices presumably in scheduling their time, and this would be perhaps inhibited in some way?

Ms. LEON. Well, Mr. Clinger, there may be a very, very few number that feel that way, but I would have to say that I've been flying since 1966, and I certainly don't feel that it's that restrictive. I think we're talking about a standard that is not only healthful but relates to safety issues, and that has to be our priority in looking at this bill.

Mr. CLINGER. Ms. McKee, I didn't understand—do you have a collective bargaining agreement at your company?

Ms. MCKEE. We're negotiating for a contract right now. We have an agreement with the company that they cannot schedule us for over 16 hours, but they do that, and they just pay us more money. Our starting salary is $650 a month. Our flight attendants are forced to work 38-, 40-, 50-hour work-days because it's the only way we can make any money.

Mr. CLINGER. You've indicated, Ms. Yamagata, that you have a collective bargaining agreement that does put limitations on it, but it's routinely ignored——

Ms. YAMAGATA. That's correct. Routinely ignored.

Mr. CLINGER. By the company, and that you have no real opportunity for redress. It takes too long to really get redress.

Ms. YAMAGATA. And even if we do, they still——

Mr. CLINGER. How do you see this assisting you in that regard? If the company is inclined to ignore a contract, might it not be also inclined to ignore this?

Ms. YAMAGATA. I don't think they would be inclined to ignore a regulation, because there would be penalties attached to it. The FAA essentially would have to come down on them, which is why the pilots who have the regulation get replacements regularly at different cities all over the world. Flight attendants they don't even take it into consideration with a contract. They just let us go on and on and on, incredible amounts of hours.

One of the things—as I was on my way into Washington, DC, I stopped at the crew desk, and I saw a number of flight attendants, and I asked them if they knew a particular flight attendant who I had heard had done 50 hours on duty, which I thought was incredibly long. They all said, "Wow," shook their heads, and then said, "Yes, we can believe that. We can believe that it happened to him." When flight attendants react in such a manner, it gives me the indication that it's very commonplace for this to occur at my carrier.

Mr. CLINGER. As I understand it now, rules for pilots have a requirement of eight hours of rest time. I gather you are seeking a 10-hour rest period. What is the justification for asking for a longer rest time than the pilots would have?

Ms. LEON. To my knowledge—and I know the American Airlines pilots—their eight hours is behind the hotel door, whereas this 10 hours would include that travel to the hotel, waiting for a limousine, a hotel van, deplaning the passengers. All of that time is considered in our 10 hours, but I know the pilots' is a hard eight hours.

Mr. CLINGER. So you're suggesting it would be the same in effect if you talked about going to and from the airport?

Ms. LEON. Yes.

Ms. FRANKOVICH. I would say beyond that, Mr. Clinger, our concern is that 10 hours is minimally acceptable. Eight hours, which we already suffer under, is insufficient, and it's that difference that is important to try to ensure there is some ability to get a legitimate amount of rest. With a 10-hour situation, you can still probably get six hours of sleep. With eight hours from the time you leave the airport and travel to your destination, check into your hotel, and then the next morning you must get up and get ready for work—each of us spends a little more time getting ready for work than some of our male colleagues, but it nonetheless cuts into our sleeping time—with an eight-hour rest, you're lucky to get four hours of sleep.

Mr. CLINGER. I have just one final question, Mr. Chairman, and I've forgotten what it was. Well, I guess I can pick it up next round. Thank you.

Mr. OBERSTAR. On that score, it isn't just a matter of getting off the plane. You're the last ones off, you get into the crew bus or whatever, you get to the hotel—we all do a lot of traveling, we members of Congress, and I feel like a gypsy sometimes bouncing from town to town, my pack on my back, and I get there at 11:00 or 11:30 at night, and by the time you unpack, you need to unwind a little bit. You can't just get out of the bus and jump into the hotel room, jump into bed, fall asleep—you're not an automaton. You know, you need a little time to just get all this stuff sorted out that you've been spinning out all day long and kind of wind down and maybe call family or just unwind a little bit.

The same thing the next morning. It takes me a whole lot longer to get ready in the morning, than I'm sure it does you, and I don't look anywhere near as good. [Laughter.]

Mr. Mineta.

I will not take a vote on that in this committee, Mr. Laughlin. [Laughter.]

Mr. MINETA. Thank you very much, Mr. Chairman.

I want to thank the witnesses for their testimony here.

Mr. Broderick says that little data has been presented during the pendency of the petitions for rulemaking on which to base an objective judgment. How do we get that data? It seems to me everything is anecdotal is what they're saying. There seems to be a lot of data there. How do we get it in the form, I guess, that is going to satisfy the regulators about this?

Ms. LEON. I can testify for the major carriers. We have a very elaborate computer system, and our particular company at this time, when you sign in, the data is there for American Airlines. I'm sure United has an elaborate computer system that——

Mr. MINETA. But in all due respect to your answer, it seems to me every answer that you may come up with, they'll say, "Unfortunately, what we have found is it's not a black and white situation." You know, they've got a slippery snake here, and I think I can maybe characterize them as being the slippery snake in this whole issue.

Ms. FRANKOVICH. I think we would agree with you, Mr. Mineta. I think the problem we feel is that it doesn't matter how much research we do. We were confronted today with testimony on behalf of the FAA and DOT which looked to us much to be a back-of-the-matchbook addition in preparation not for a thorough evaluation of the situation, but in preparation for this hearing today, and it doesn't matter how many arguments we come up with, there's always an argument why it can't be done if there is no interest in doing it, and that seems clearly to be where we're at today.

We're willing to cooperate and provide whatever information we can, and we believe the information is available, but if no one is interested in looking at it, it really doesn't matter what we come up with.

Mr. MINETA. No matter how much you give, it doesn't count anyway.

Let me ask you a question, or let me make a statement to you. How would you respond? "We have been unable to identify a single incident, however, that fairly could be said to have been adversely affected by flight attendant fatigue."

Ms. FRANKOVICH. I think that certainly where you do not study and make any equations in accident investigation as to the relationship between the number of hours someone is working and the situation, you're not going to find something you're not looking for. There are passengers who die in flight from heart attacks, there are passengers who die from crashes, and there has been no investigation, other than the one Galaxy situation where the NTSB referred to the duty limits for the flight attendant, where this kind of comparison has been made.

Mr. MINETA. How do we satisfy them, then, that flight attendant fatigue is a factor? Is there any way of really doing that? Do we have to put monitors on all of you as you run up and down the aisle, as you sit in your jump seat for takeoff and landing? Do we have to have some kind of, you know, electrocardiograms? Is this what they're looking for? Can we simulate—I guess as proud as Mr. Broderick is about having a simulator for the pilots—do we have a simulator? Maybe what we need is a stimulator for him. [Laughter.]

Ms. FRANKOVICH. We hope that you, sir, and your colleagues will serve to accomplish that goal for us, but as to what is needed to prove up the case at this point, we think this could be easily analogized to things that are self-evident. If it is self-evident to the Administration and to the DOT that without proof of incident drug testing is mandated and necessary for the protection of the public, we think it is equally self-evident that fatigue, which can be proven over and over again in any number of studies, adversely affects performance, and it therefore should, in the same way without proof of incident drug testing was mandated, likewise protections for our work force should be mandated.

Mr. MINETA. Ms. Yamagata, you were talking about if you refused to take a trip, or you were talking about one of those flights—I forgot who it was—talking about Jordan.

Oh, and just let me ask the panel—it's been my understanding that under the CRAF flights, even your union contracts and those limitations don't apply. Is that correct?

Ms. FRANKOVICH. Yes, that is correct for us.

Mr. MINETA. So even the negotiated contract you have with your own carriers, where you have one, doesn't even give you the protection as it relates to duty time?

Ms. FRANKOVICH. That is correct.

Ms. LEON. At American, the duty day for the turnaround from the European staging point over to Saudi Arabia exceeds what is contractually our duty limit. The day is incredibly long.

Mr. MINETA. Ms. Yamagata, let me ask you about—how do you protest? How do you make a legitimate—without going through the "grievance" procedure, is there any way to appeal to someone's "reasonableness"?

Ms. YAMAGATA. No. You may speak to the scheduler, you may speak to the fellow in charge, you may speak to your director of your department, but once you get an assignment, that essentially is what you need to do.

Mr. MINETA. And if you are UNA, what happens?

Ms. YAMAGATA. I'm sorry?

Mr. MINETA. If you are unavailable. UNA—isn't that the phraseology that you use for being unavailable for a flight?

Ms. YAMAGATA. Not at our carrier.

Mr. MINETA. Or is that one where you miss because—suppose you've just come off of a flight, and they say, "Okay, you've got to go on to some point," and you say, "I just can't. I'm just dead tired. I just can't do it."

Ms. YAMAGATA. Then they say, "You must." And then you say, "I just don't feel that I can handle it. At two hours I feel very differently from how I feel at 22 hours, and you're asking me to get on a flight when I don't feel that I can perform 100 percent and be alert." And then they say, "This is an emergency. You must go. There's no one else." They haven't bothered to look, but they always can declare an emergency. So then you must go.

Mr. MINETA. They can't call a relief crew or someone on relief?

Ms. YAMAGATA. We have provisions in our contract that require that they have a standby crew available at all times at all bases, but they just don't do it.

Ms. LEON. Mr. Mineta, I recently spoke with a flight attendant at a non-union feeder carrier—in fact, it's a feeder for AMR—and they can be fired at will. In essence, they're on probation at any time, and their work rules are what I consider horrible. And if they do call the FAA and say, "I was extremely tired, I only got a three-hour break," or they do complain, they will be terminated. That is their answer.

Ms. MCKEE. May I say something, Mr. Mineta? The example about Saudi Arabia was one that I gave, and we do understand that there have been special requirements because of the CRAF. I did not take any of the examples that had us begin in Brussels, go to Saudi Arabia, and return. The examples that I gave you started in California or in New York and worked all the way to Saudi Arabia and back to Brussels. That, I think, is too long of a day.

Mr. MINETA. Mr. Chairman, if we had whistle-blower protection legislation, I'd be able to ask Ms. McKee who her carrier is, but I'm not going to, Mr. Chairman.

Mr. OBERSTAR. The gentleman's time is expiring.

Mr. MINETA. Thank you very much, Mr. Chairman.

Mr. OBERSTAR. The gentleman from Texas, Mr. Laughlin?

Mr. LAUGHLIN. Thank you, Mr. Chairman.

Ms. McKee, as I listened to the first three pages of your testimony, I thought you were a Member of Congress. I can identify with you because when I leave here I fly three hours and drive two more hours, and I can tell you the first year or so I did not mind arriving someplace in my district at 11:00 p.m. and having a 6:00 or 6:30 a.m. appointment, because all my life I had to get up early. But after flying and then driving for a few hours, I will not accept a 7:00 a.m. appointment; and I just really dislike 8:00 a.m. appointments after that kind of evening.

So, while I can appreciate a little bit of what you and your colleagues go through, I cannot fully appreciate it, because you went on past page 3 to describe some conditions that are not suitable work conditions for Americans. Perhaps we will tolerate that in other countries, but I think in a country that takes pride in being a

civilized country with great leadership, those kinds of work conditions for Americans should not be expected or tolerated.

My question to each of you is, do you know of any flight attendant that Mr. Broderick, or anyone connected with Mr. Broderick or the FAA, ever talked to about these conditions? Have you ever heard any rumor that the FAA ever went out and tried to find out anything about what you have been complaining about for several years? Have you ever heard a rumor that the FAA tried to talk to one of you freedom-loving, law-abiding American citizens about these work conditions?

Ms. FRANKOVICH. I think the answer to that is no.

Mr. LAUGHLIN. Can all four of you say that you have never heard a rumor that the FAA talked to any flight attendant?

Ms. MCKEE. The only thing that I have ever seen the FAA do is come on board and check my manual to see if I have revisions. They've never asked me any questions about my duty days.

Mr. LAUGHLIN. I want you to clearly understand my question. My question is, have you ever heard a rumor that the FAA has ever talked to a flight attendant about these long work hours and duty conditions that you are talking about?

Ms. FRANKOVICH. No, and I think we would tell you as well that we have an industry where information passes across the country like lightning, and I would think if there were FAA investigators on board talking to flight attendants about whether or not they felt they needed protections of law, we would have heard that rumor.

Mr. LAUGHLIN. If you come across a rumor that they have, would you mind notifying this committee?

Ms. FRANKOVICH. We certainly would.

Mr. LAUGHLIN. The next question I have for each of you is, has there been any conspiracy on the part of the flight attendants, your associations and/or your groups to keep these work conditions a secret from the FAA? [Laughter.]

Ms. FRANKOVICH. We have been as loud as we can.

Mr. LAUGHLIN. Or from Mr. Broderick?

Ms. FRANKOVICH. I think we also try to lobby on every flight where we have that opportunity, as well.

Mr. LAUGHLIN. I'm aware of that, and that's why——

[Laughter.]

Mr. LAUGHLIN. That is why I am mad at Mr. Broderick, because I now no longer admit that I'm on the Aviation Subcommittee.

You have a very compelling situation, and I hope that the Government you are looking to for assistance will find the courage to give you that assistance.

Thank you, Mr. Chairman. That's all I have.

Mr. OBERSTAR. Thank you.

Mr. Clinger.

Mr. CLINGER. Thank you very much, Mr. Chairman.

Just following up on Mr. Laughlin's question, we were told the FAA went through a long fact-finding exercise a year or so ago preparatory to drafting a rule which, as we know, has never been published. That fact-finding was to determine what the practices were in the industry, and you're telling me that none of you individually or anybody you've heard of or any of your unions were ever contacted in this regard?

Ms. LEON. That's correct. Mr. Clinger, to my knowledge of the study that was done, it was data collected from the carriers, and it was data that was given by the carriers that they voluntarily decided to give the FAA, not anything that was demanded, and we were not contacted at my union.

Mr. CLINGER. So clearly, none of the anecdotal things which have been so compelling here that you have outlined for the committee—I mean, some of the horror stories—were not included in that data collection process.

Ms. FRANKOVICH. We did submit what has been deemed to be anecdotal information, but I don't know that it was given any credibility or any consideration in the determination of where we find ourselves today. It obviously was not deemed to be persuasive.

Mr. CLINGER. You don't know any more than we know why somewhere in the process that rule which was understood to have been drafted has somehow bogged down in the great bureaucratic mystery machine.

Ms. FRANKOVICH. We don't know why we lost the promise we were made in 1978 or in 1980 or why we now are in the same position we've been in for the last 40 years of trying to get these rules changed.

Mr. CLINGER. It seems to me we're at a point where the FAA is stating they can find no evidence that safety of passengers is involved in fatigue. Now, you know, we dispute that. There could be a lot of argument about the effects of fatigue but at least from their point of view, their vantage point, they have determined that safety is not involved.

Regardless of that, we're really talking here more in terms of a humane issue as much as anything. I mean, the kinds of hours that you've talked about working is just really impossible, and nobody should be expected to do that. It seems to me that if the Department is accepting the fact that under their present law they can only regulate in areas having to do with safety—that's their mandate under existing law—then it is incumbent on us—that is, the Congress—to give them the authority, which is to say, "All right, safety's not involved, but sheer humanity and the health and well being of a large number of employees of the airline industry are affected by this," then we give them that authority.

Ms. FRANKOVICH. We would certainly hope you could find your way to do that. We feel that safety is involved, but where you can't find something you haven't looked for, we may never be able to prove that.

Mr. CLINGER. Well, I think that's right, and I think the FAA takes the position "Our law requires us to regulate in the areas of safety, we don't think safety is involved here; therefore, we're not going to regulate," and therefore what we have to do is give them the authority to regulate even if it doesn't involve safety. Thank you.

Mr. OBERSTAR. Well, I couldn't agree more with that conclusion, Mr. Clinger. I think that there is more involved here than safety.

If you want to do a numbers search, you can come up with just about any conclusion you want, and I recall this very same agency sitting at that witness table telling us, "We can't give you figures on runway incursions." "Why?" "Because we don't have a defini-

tion of a runway incursion, so we don't know what one is, and we can't tell you how many there are." "Well, go out and get a definition."

Anybody else with an ounce of common sense knows what a runway incursion is. We've had a number of them. And they went out and they made a definition and they came back and they measured it, and now we're beginning to do something about them. I've heard that story far too long from this agency, and frankly I have to believe that their conclusions are driven by considerations other than those that they have cited in the testimony.

What they effectively did was a record search, going through a number of records, and coming to a conclusion that they couldn't find that anybody died in an aircraft accident as a result of a flight attendant being over-fatigued. Well, you know, if you didn't talk to anybody or look hard enough, you might not find that.

But there are a number of other elements of safety which the FAA has insisted upon and written into its Federal air regulations that have not been documented that don't rely on a body count, as Mr. Broderick was saying earlier today, but their conclusion that "there is no empirical evidence that shows any correlation between flight attendant duty time, flight attendant safety duties, and risk to passengers" is to me the result of not having looked for the answer that they were told to search for.

More specifically, why is 14 hours chosen as the time? Why not 13 or 15 or 12 or 16? Why 14?

Ms. FRANKOVICH. In preparation for trying to present something that would be acceptable, we did a thorough analysis of the contracts that existed in the industry, we did a thorough analysis of whatever data we could find on studies about sleep patterns, and we did a thorough analysis of the industry internationally, and we arrived at a consensus approach, which was the 14-hour figure.

You are correct that it could have been 13 or 12 or 10 or 11, but we stretched to what we thought was a reasonable number—not necessarily reasonable for us, but reasonable for the carriers—and which would allow us to provide the carriers the kind of flexibility they need for scheduling. Fourteen hours seems empirically reasonable, if still slightly fatiguing for us, but it's also not outside of what many of the carriers already have in practice.

Mr. OBERSTAR. All right.

You have referred at various points in your collective testimony to company declarations of emergency or needs of service clause in your contracts or in your work rules agreements with the airlines. I suspect the principal argument against the legislation is that it will be too rigid and will not allow flexibility. Are these needs of service clauses perhaps too flexible? Is "emergency" a term too frequently used? And is there some other yardstick for measurement of that objective that could be used to give the carriers some flexibility when there really is an emergency or when needs of service demand? Or is that something that you are very fearful of?

Ms. LEON. Well, in terms of that flexibility, I would have to say that we're looking at a very reasonable proposal here that two of the majors, which probably comprise 30,000 flight attendants, already contain these rules, we've worked under them, they have worked for two of the major airlines. Beyond that, some of the sto-

ries I've heard from my colleagues sounds to me as if there's too much flexibility. But I think these are reasonable rules, and I think if at least half of the flight attendants are already working under comparable rules, we're not asking for anything that would be inflexible.

Mr. OBERSTAR. Ms. McKee, Ms. Yamagata, any comments?

Ms. MCKEE. Well, my company has a few scheduled flights, and other than that, they run the company in a state of emergency at all times. [Laughter.]

Mr. OBERSTAR. That's what I was afraid of. You work for "Panic Airlines." [Laughter.]

All right. I got your point.

Finally, I think, Ms. Yamagata, you made the point very well that airlines already keep records of duty time, so how can this be an additional $1 million cost for recordkeeping that was alleged by the FAA? They certainly didn't do an objective analysis there. I think that's a very compelling point.

Mr. Mineta, do you have any further questions or comments?

Mr. MINETA. Mr. Chairman, I have no further questions. I just want to thank our witnesses and those in the industry who—you know, I think there's got to be a recognition that the foremost duty that flight attendants have is that of safety, and so to have the FAA say that "We have been unable to identify a single incident that fairly could be said to have been adversely affected by flight attendant fatigue," and then it says, "In other words, the accident data do not identify flight attendant fatigue as a factor"--the question is did they even ask that question as to whether or not fatigue is a factor?

So to me it just blows my mind that we have a situation in which the FAA says there's no need for this, and so again I just want to thank everybody for what they do in the industry and in terms of at least the recognition on their part that this is a service industry. Thank you very much.

Mr. OBERSTAR. I want to thank the panel for your presentation, for your patience in being with us, and for your help in responding to these questions.

[Ms. Leon's prepared statement appears on page 166.]

Mr. OBERSTAR. Our next witnesses consist of Mr. Walter Coleman, Vice President of Operations, Air Transport Association; and Deborah McElroy, Vice President, Regional Airlines Association.

Welcome. We're glad to have you here. Which of you wishes to proceed first?

Ms. MCELROY. I'm going to go first, if that's acceptable.

Mr. OBERSTAR. Very fine. Proceed as you wish.

TESTIMONY OF WALTER COLEMAN, VICE PRESIDENT, AIR TRANSPORT ASSOCIATION; DEBORAH C. McELROY, VICE PRESIDENT, REGIONAL AIRLINES ASSOCIATION

Ms. MCELROY. I'm Debbie McElroy, Vice President of the Regional Airline Association. RAA, on behalf of its 78 member air carriers, appreciates this opportunity to present the views of the regional airline industry on H.R. 14, a bill to establish limitations on duty time for flight attendants.

Regional airlines are committed to providing safe, efficient air transportation, connecting the Nation's smaller cities to the major hub airports. The industry carried over 40 million passengers last year, with RAA member carriers providing service to more than 90 percent of those passengers. Regional carriers generally operate aircraft propeller-powered in the 19- to 75-passenger range; however, some of our carriers fly small jets. In total, the industry flies approximately 1,900 aircraft.

Flight attendants, as you know, are only required on aircraft with 20 or more seats. Consequently, flight attendants are employed on less than one third of the aircraft operated currently by regional airlines. According to RAA figures, there are approximately 3,500 flight attendants employed in the regional airline industry. These men and women, like their counterparts in the major airlines, are dedicated safety professionals. The regional airline industry recognizes and appreciates the critical role flight attendants play in the safe transportation of our passengers.

I was privileged to present our views to this subcommittee nearly two years ago on legislation that was very similar to H.R. 14. Our position, however, has not changed. Regional airlines continue to oppose legislation to impose duty time restrictions for flight attendants, because we do not believe there is a legitimate safety reason to interfere with the successful contractual relationship between flight attendants and regional air carriers.

It is important to note that there's not a single recorded incident where flight attendant fatigue contributed to passenger injury or loss of life in our industry.

FAA's recent report, "Study of Current Industry Practice: Flight Attendant Flight Duty and Rest Times," while not drawing specific conclusions, does, we believe, provide sufficient data indicating that Federal regulations in this area are not justified. An equivalent of 1,300 months of flight attendant records for seven regional air carriers—some of which were unionized, some of which were not—were analyzed, with only five cases found where duty time exceeded 18 hours and 23 where duty time exceeded 16 hours.

The study's authors concede that more examples were discovered than would have been found if the same amount of effort had been invested in pure random sampling. Therefore, the examples of below minimum rest or extended duty periods cited in the study are the result of a targeted effort to identify the most extreme cases of extended duty time for flight attendants. Such exceptions do not warrant the imposition of onerous Federal regulations.

Passage of this proposed legislation will not materially change the work rules for the vast majority of regional airline flight attendants, but it would create very problematic recordkeeping requirements. H.R. 14 as currently written would impose different and potentially more restrictive limitations on flight attendants than those currently in place for the pilots.

FAA regulations governing pilots are geared to flight hours and rest periods rather than duty time. This, we believe, is a more practical system and one with which the carriers are very familiar. In fact, a large number of regional carriers actually schedule their flight attendants with their pilots, using the same rest requirement. The promulgation of rules as outlined in this regulation

could potentially wreak havoc on the scheduling operations of the carriers and impose significant costs at a time when the industry can ill afford to absorb such expenses.

Regional carriers are already faced with the enormous costs of the installation of a wide variety of sophisticated avionics equipment, as well as the expenses involved with enhanced security regulations, increased random drug testing rates, carriage of disabled passengers, and aircraft modifications related to cargo bins, and aging aircraft. These safety-based regulatory requirements alone will cost the industry tens of millions of dollars in 1991. Adding duty time restrictions for flight attendants to the list of increased Federal regulations with which the regional airline industry must comply will only add to these costs with no concurrent safety benefit.

Thank you very much for the opportunity to appear before this committee, and we greatly appreciate your consideration of our comments. I'm prepared to answer any questions that the subcommittee may have on my testimony.

Mr. OBERSTAR. Thank you.

Mr. COLEMAN. Good afternoon, Mr. Chairman, members of the subcommittee.

I'm Walter S. Coleman, Vice President of Operations for the Air Transport Association. On behalf of our passenger-carrying member airlines, I'd like to thank you for the opportunity to appear here today to express our views on H.R. 14, Limitations on Flight Attendant Duty Times. I will read an abbreviated version of my submitted testimony.

Mr. OBERSTAR. Your entire statement will appear in the committee record.

Mr. COLEMAN. Thank you, sir.

All ATA member airlines are either national or major carriers. The nine major U.S. airlines, all ATA members, employ approximately 72,000 of the approximately 83,000 flight attendants among the U.S. carriers. Nearly two years ago, the Air Transport Association appeared before this committee to comment on legislation that was very similar to H.R. 14. Two important points were conveyed by ATA and the accompanying panel, comprised of airline flight attendants.

First, ATA and its member airlines recognized the vital and important safety role which our flight attendants perform each day on every flight. Second, ATA questioned the need to establish Federal regulations governing duty time limits and rest requirements for flight attendants. Our views remain unchanged. Safe operations are the number one priority of the airlines.

More significantly, in more than 50 years of commercial airline operations, there is not one example of flight attendant fatigue which contributed to passenger injury or loss of life. On the contrary, the performance of flight attendants in very trying circumstances related to airplane accidents, hijackings, or other demanding and challenging situations has met and in some cases exceeded expectations.

Understanding and recognizing the safety responsibilities and record of our flight attendants, one key question needs to be addressed in this hearing today. Do the duty time and rest require-

ments as presently applied by the carriers' various labor contracts and work rules provide for a work environment that permits the flight attendants to perform their safety tasks? The ATA believes the answer to that question is yes. More importantly, we believe that the study of flight attendant duty records completed by the FAA in September of 1989 at the request of this subcommittee reaffirms the industry position.

In our previous testimony, ATA and the flight attendant panel expressed the view that there was an absence of evidence supporting the need for flight attendant duty time limits and rest requirements. At that time, we quoted from FAA's response denying the petition submitted by two flight attendant groups that there was "no empirical evidence that shows any correlation between flight attendant duty time, flight attendant safety duties, and risks to passengers." The denial, as you may recall, further stated there is no showing that the unrelated instances cited in a few comments of lengthy flight attendant duty time either were the result of work rules mandated by the company or were systemic throughout the industry. Nor was there a showing that these instances had an adverse impact on safety.

While the study intentionally did not draw any conclusions and made no policy recommendations, the data was very clear. Some 12,500 records were examined to determine maximum duty days and minimum rest periods. Among the five major and four national airlines reviewed, of these 12,500 records only six exceeded 18 hours and another 39 exceeded 16 hours. The study's outcome provides significant evidence that a Federal regulation for duty time and rest requirements cannot be justified.

Mr. Chairman, the airlines do not believe that the legislation is necessary for two fundamental reasons. One is the existence of contracts or work rule arrangements between the airlines and their flight attendants. Some contracts and work rule arrangements go well beyond these two items that include other elements of interest to flight attendants, such as on board rest arrangements and flight time limits, and I should note that according to FAA's study, 78 percent of U.S. flight attendants work under union contracts. The second reason the industry opposes this legislation is the absence of data to support the position that the regulations will improve airline safety. This is an area best left to traditional labor-management negotiation.

Though the study did not address the issue of cost, I would like to take a moment to do so. As you know, the airline industry experienced unprecedented financial losses in 1990. In fact, these losses may exceed $2 billion. Travel concerns as the result of hostilities in the Persian Gulf will likely leave us with additional losses in the first quarter of 1991. Though no formal cost analysis of H.R. 14 has been completed by the airlines, one carrier has estimated the implementation of these unnecessary regulations will increase their operating costs by nearly $50 million a year. Additional flight attendants and the loss of revenue seats to comply with the on board crew rest requirements are the main reasons for the increased cost.

Mr. Chairman, the airlines cannot absorb these costs. The result of this legislation will be increased ticket prices to customers. While the industry has a long history of supporting and paying for

vital safety initiatives, including aging aircraft modifications, the introduction of high-G dynamic load passenger seats, security improvements, traffic alert and collision avoidance systems, wind shear detection, replacement of interior cabin materials with less flammable materials, cabin modifications for the handicapped, and drug testing, the FAA's 1989 study does not suggest that flight attendant duty time limits is a safety initiative in need of Federal regulation.

ATA member airlines well recognize the role of flight attendants in the safe and efficient provision of air transportation; however, we firmly believe that the contracts and work rules that have been agreed upon between the airlines and their flight attendants are effective in providing a safe work environment. The only basis for establishing flight attendant duty time limitations and rest requirements would be to address a significant and well documented safety concern. Our member airlines do not believe that the FAA's study defines a safety issue that requires regulation.

May I refer to the question raised by Mr. Laughlin and subsequently by Mr. Clinger on talking to union reps? The second page of the executive summary of the FAA report does in fact state additional data was derived through personal interviews conducted with management personnel, union representatives, and flight attendants. We interpreted that that they did do an adequate job of talking to union people, and we'd hope that that was true. We're disappointed to hear a different view on that.

Mr. Chairman, thank you for the opportunity to appear before the committee today, and I have concluded my formal testimony and would be pleased to answer any of your questions.

Mr. OBERSTAR. We will have some questions, but we must break for a recorded vote on the House floor and resume in hopefully 15 minutes to begin questions of this panel. Thank you.

[Recess.]

Mr. OBERSTAR. This subcommittee will resume its sitting.

We've heard some rather shocking stories, accounts of excessive time spent by flight attendants on duty. You sat here throughout much of that testimony and heard it yourself. How do those excessive duty days compare to the testimony you've given? You've said that there are agreements as well as the labor contracts with the flight attendants unions that are organized and that the duty times are reasonable and responsible, but then we heard these stories that, you know, are not fabricated. They certainly wouldn't come and imagine something. How can those things happen?

Mr. COLEMAN. Sir, I certainly don't think they're put into the pattern for offering to the crews, because they wouldn't bid for them, so they certainly aren't something that the carrier plans on happening. Certainly, in our member airlines that wouldn't be part of a built-up pattern. They must be extraordinary circumstances. I must admit listening to them myself and having been a crew member on transatlantic operations, they don't sound very appealing.

I'm surprised, though, that to the extent that they're being enumerated here they weren't revealed in the study of the records. I felt some confidence and continue to in the study that FAA executed that it was representative of what was really going on out there

and we could in fact use that as a basis for proceeding with pursuit of this regulation if that were necessary.

Mr. OBERSTAR. Well, I think the reason they didn't appear in the record is that FAA didn't ask any flight attendants. They just looked at records. They didn't look at people in compiling their study.

Mr. COLEMAN. Well, the report indicates they talked to union representatives and flight attendants.

Mr. OBERSTAR. Well, they didn't talk to anyone that testified here or anyone that any of them know.

You cited a carrier who gave an estimate of a $50 million a year cost, but you didn't have any back-up for that. Is there a back-up document? Is there something on paper that the carrier provided to ATA to arrive at a $50 million a year cost, and if so, would you provide that for the committee hearing record?

Mr. COLEMAN. The carrier provided it to us at our request, because we needed to get some idea of what the impact of this proposed bill would do to them. They asked that we not provide it to you, and if we were to, not to identify it. So I will see if they will in fact let us provide you the data, but I'm almost assured, sir, that it would not identify the carrier.

Mr. OBERSTAR. Well, we needn't identify the carrier. If there is a document, though, that has empirical data that is arrived at on an objective basis, we would find it very useful for the purposes of the committee's legislation before we get to mark-up on this.

Mr. COLEMAN. All right, sir. I'll ask them.

[The following was received from Mr. Coleman:]

Air Transport Association ata OF AMERICA

1709 New York Avenue, NW
Washington, DC 20006-5206
Phone (202) 626-4000

EXAMPLE OF THE AFFECT

OF H.R. 14

ON THE FLIGHT ATTENDANT REQUIREMENTS

OF AN AIR TRANSPORT ASSOCIATION MEMBER AIRLINE

The cost figures provided for this analysis are representative of a large U.S. airline operating both international and domestic service with approximately 10,000 flight attendants.

A. A 5% to 6% (500 to 600) increase in the number of flight attendants to operate the same number of flights would be necessary due to the minimum rest period prescribed which includes a debriefing provision.

1. 550 Flight Attendants X $3,400/Mo (Fully allocated compensation including salary and benefits) = $1,870,000/Mo

2. Lodging expenses associated with increased numbers of Flight Attendants and resulting additional layover requirements. 380/day X 30 days = 11,400 rooms monthly x $45.00 = $513,000/Mo

3. Additional Per Diem @ $1.60 per hour = $218,800/Mo

B. Lost revenue to block 3 Coach seats on international flights of 8 hours or more with nominal intercontinental fare of $480. Computation is based on requirement affecting 34 flights/day. $480 x 3 seats = $1,440 per flight x 34 flights/day = $48,960 total/day x 30 days = $1,468,800.

TOTAL MONTHLY INCREASED COSTS = $4,070,600.00

TOTAL ANNUAL INCREASED COSTS = $48,847,200.00

Mr. OBERSTAR. How many of ATA's members do have contracts with its flight attendants?

Mr. COLEMAN. Of our 16 passenger-carrying members, I think all but one or two have actual union representation. They all have work rules. So 14 or 15 of the passenger carriers have in fact union contracts.

Mr. OBERSTAR. And so only one or two of your member carriers do not have contracts?

Mr. COLEMAN. They have work rules, but not union representation, sir.

Mr. OBERSTAR. So it's the work rules that then govern the flight and duty times. How do those flight and duty times of the non-unionized carriers compare to those of the unionized carriers?

Mr. COLEMAN. Virtually identical. Very hard to tell the difference from the terms.

Mr. OBERSTAR. So it's an industry standard, if you will?

Mr. COLEMAN. Basically, yes, sir.

Mr. OBERSTAR. Ms. McElroy, as far as regional carriers are concerned, to what factors do you attribute increased cost of operation, should H.R. 14 become law?

Ms. MCELROY. Well, many of our carriers do not have automated systems to track these pilot flight and rest times, and as the study points out, most of our records are manual, whether they be payroll or the pilot records, so you'd be talking about instituting a system that would likely, because of the volume of both pilot and flight attendant records to be kept, involve procurement of some automation equipment, as well as the fact that H.R. 14 as currently written would cause the carriers to have separate programs because, as was mentioned several times, the restrictions are different in that H.R. 14 is geared to duty time, and the pilot regulations are not.

Mr. OBERSTAR. You must have payroll records, though, and if they're paid by the hour——

Ms. MCELROY. Well, they do have payroll records, but again, those are manual, and I don't know that the system that's currently in place would require the same kind of constant updating as you would in something envisioned in H.R. 14, because you would need to be aware of when your flight attendants were coming close to those restrictions. So it may in fact involve a much more complex system of recordkeeping than they have for payroll.

Mr. OBERSTAR. I'm rather surprised that anything in the payroll area is manual and not automated, not computerized.

Ms. MCELROY. Well, we have a number of carriers, unfortunately, who have not fully gone to the level of automation that you might imagine. And there are carriers, as pointed out in the study, who do have fully automated systems.

I apologize. We do not have, because we have so many carriers with such wide varying degrees of automation and sophistication in their recordkeeping, an accurate industry average to give you. We can certainly look to provide that data to the committee at a later time, if you'd like.

Mr. OBERSTAR. Are you aware of cases in which regional carriers require, either on an emergency basis or on a need basis, flight and duty times longer than 14 hours?

Ms. MCELROY. I think certainly the study pointed out some of those cases due to circumstances such as maintenance or weather or ATC. I'm sure those instances do occur.

Mr. OBERSTAR. Your carriers are not doing the international flights and those long-leg flights or transcontinental flights. Regional, by its very name, defines the carrier and the area it serves in a relatively restrained path, so you might not be flying as lengthy times as the majors, unless those limitations would apply, and you certainly could have circumstances where flight attendants might be required to serve much longer than 14 hours.

Ms. MCELROY. That is correct, sir.

Mr. OBERSTAR. I don't have any other questions. I think you've covered the points and made the case that each of you wanted to make on behalf of your association, and I thank you for being with us today.

[Ms. McElroy's prepared statement appears on page 183.]

[Mr. Coleman's prepared statement appears on page 161.]

Mr. OBERSTAR. There are additional materials that the subcommittee has requested from the FAA which we expect to receive today and certainly by the end of this week, and upon consideration of that and other material developed in the course of this hearing, we will determine a time for mark-up, which I hope will be in a relatively short period of time.

We've given ample consideration to this issue over a period of almost two years, and the FAA has several times over the past year and a half represented to me and to other members of the subcommittee on both sides of the aisle that they had a rulemaking, that they were preparing to issue that rulemaking, if we'd just be a little patient, they were going to issue the rulemaking. The rulemaking never materialized. I think that the committee is at an end of patience with the FAA on this subject, and we will now proceed on the legislation.

Thank you very much to all witnesses for being with us today, and the subcommittee stands adjourned.

[Whereupon, at 1:52 p.m., the subcommittee adjourned, to reconvene at the call of the Chair.]

PREPARED STATEMENTS OF WITNESSES

STATEMENT OF ANTHONY J. BRODERICK, ASSOCIATE ADMINISTRATOR FOR REGULATION AND CERTIFICATION, BEFORE THE HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION, SUBCOMMITTEE ON AVIATION, CONCERNING FLIGHT ATTENDANT DUTY TIME. MARCH 13, 1991.

Mr. Chairman and Members of the Subcommittee:

I welcome the opportunity to appear before the Subcommittee today on the topic of flight attendant duty time limitations. A little less than two years ago, I appeared before you, shortly after the FAA denied petitions from the flight attendant unions seeking the establishment of regulatory limitations on duty time. You will recall that the FAA denied the petitions in 1989, citing a "lack of concrete evidence showing any correlation between flight attendant duty, flight attendant safety duties, and risk to passengers."

I told you at that time that our decision not to consider rulemaking was based not on a lack of concern about the issue, but a lack of data. We simply did not have a complete or accurate picture of the real world of duty scheduling in which flight attendants operated--what their work schedules were like, whether extra hours worked were because employees sought compressed work schedules or extra hours, whether heavy work schedules were common or aberrations. Little data had been presented during the pendency of the petitions for rulemaking on which to base an objective judgment.

I announced at that hearing that the FAA would vigorously pursue data on flight attendant work schedules, and that we would keep you apprised. We have done both of those things. As I committed, we conducted an extensive survey of industry scheduling practices, prepared a report documenting what we found, and have worked to keep you and your staff apprised of our efforts along the way. Our "Report on the Study of Current Industry Practice - Flight Attendant Flight, Duty, and Rest Times" reflected a review of current air carrier industry scheduling practices and actual work hours of flight attendants. The study targeted longer-than-average duty days, below-minimum rest periods, and instances of long flight hours. Certain segments of the industry were found to encounter flight attendant duty hour problems more frequently than others because of the nature of their operations, although these problems were by no means prevalent.

One statement I made at the hearing was that we were going to "try and develop a data base that will convince all of us of the correctness of whatever decision we need to make as a result of that and it will be there in black and white." That was my goal. Unfortunately, what we have found is not a "black and white" situation. The preponderance of flight attendant schedules appear to be well within a zone of reasonableness; some occasional work practices on the other hand appear to be excessive. The data are not dispositive, however. Moreover, the dilemma we see is that, while the cost of recordkeeping <u>alone</u>, if duty limits were

imposed, would total more than $1 million each year, there are no readily quantifiable benefits that we can identify to offset that cost.

Data from 1975 through 1989 showed that approximately 38,000 air carrier passengers were aboard aircraft involved in evacuation or evacuation-related occurrences. We have been unable to identify a single incident, however, that fairly could be said to have been adversely affected by flight attendant fatigue. In other words, the accident data do not identify flight attendant fatigue as a factor.

As you know, the regulatory process today is governed by a variety of legislative and legal requirements, mandating that we evaluate costs/benefits, impacts on small businesses, paperwork burdens, and the like. In this instance, based on the absence of demonstrable, quantifiable benefits to the traveling public that would offset the clear costs of a rule, the Administration has concluded that rulemaking is not warranted. I want to stress, however, that this does not mean that we do not place a high value on the safety role of flight attendants, or that we in the FAA are unconcerned about the issue, or that it is a "closed book." To the contrary, we believe it is important to stress with industry the need for appropriate attention to flight attendant scheduling. We are developing an Advisory Circular that will be

widely distributed in the industry outlining our study findings and what we believe is appropriate scheduling of flight attendant duty time. Should research results or other data suggest in the future that a regulatory solution is appropriate, we will address that possibility after reviewing that data.

Before closing, Mr. Chairman, I would like to state that we strongly oppose the enactment of H.R. 14, which is pending before the Subcommittee. Our analysis reflects that the enactment of this legislation, with its detailed scheduling requirements, would impose costs of more than $1 billion over a 15 year period on the airline industry, which discounted to 1989 dollars is still more than $550 million.

One of the main themes at the Public Works and Transportation Committee's recent aviation posture hearing was, of course, the difficult financial plight currently being experienced by U.S. carriers. An additional burden of more than $550 million on our airlines, without a corresponding level of safety benefits, would be a substantial, undue financial drain on their resources and could serve to lessen their ability to shoulder higher priority safety responsibilities. Costs under H.R. 14 would be incurred for additional hotel stays, flights delays, staffing requirements and positioning. As you know, H.R. 14 would require an air carrier to provide a flight attendant with at least 10 consecutive

hours of rest after a duty period of 14 hours or less in domestic operations. The bill provides no means of extending the 14 hour duty period to contend with operational delays, nor does it provide any means of reducing the rest period. The bill's 10 hour domestic rest requirement could pose conflicts between flight attendant schedules and pilot schedules, in that pilots can be scheduled to receive as little as 8 hours rest.

In closing, Mr. Chairman, I would like to acknowledge that I appreciate the concerns you and other key Members of the Subcommittee have long had over the difficult issue of flight attendant duty time. Your personal commitment to aviation safety is to be commended. I look forward to continuing to work with you and the Members of the Subcommittee on the difficult challenge of improving the safety of our air transportation system.

I would be pleased to respond to questions you may have at this time.

JUL 11 1990

REGULATORY EVALUATION, INITIAL REGULATORY FLEXIBILITY DETERMINATION, AND TRADE IMPACT ASSESSMENT

FLIGHT ATTENDANT DUTY PERIOD LIMITATIONS AND REST REQUIREMENTS

(NPRM, 14 CFR PARTS 121, 125, AND 135)

Reviewed by Archie Muckle, Jr.
Office of Aviation Policy and Plans
Operations Regulatory Analysis Branch
APO-210
July 1990

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Executive Summary

The Federal Aviation Regulations (FAR) establish maximum hours or periods of service for flight crewmembers, dispatchers, and aircraft mechanics. The subject of similar flight and/or duty limitations and rest requirements for flight attendants has been debated for many years. After extensive research on the issue, the Federal Aviation Administration (FAA) has determined that certain limitations and requirements for flight attendants are necessary to address extreme cases of inadequate rest that could directly affect safety in commercial air transportation. The proposed rule would establish scheduled duty period limitations and rest requirements for flight attendants employed by air carriers operating under Parts 121, 125, and 135, as well as recordkeeping requirements for these proposed limitations. In addition, the proposed amendments would require that carriers have at least one flight attendant in addition to the minimum complement required by the carrier's operations specifications in order to extend scheduled duty limitations.

This regulatory evaluation of the proposed rule to establish scheduled duty period limitations and rest requirements for flight attendants has determined that operators will incur costs for recordkeeping and, in some cases, increased use of flight attendants to augment cabin crews.

The FAA recognizes that there is a great deal of uncertainty associated with determining the costs and benefits of this proposal. Nevertheless, the FAA estimates that over 15 years, the proposed amendments could cost the air carrier industry from $8.3 to $17 million, discounted, in 1989 dollars. The lower end cost reflects recordkeeping costs only. The higher end cost reflects recordkeeping costs plus the cost of augmenting flight attendant crews. Most of the cost of augmenting flight attendant crews is expected to be incurred by supplemental carriers. The FAA expects the proposal, if enacted, to help ensure that flight attendants are rested and alert when performing emergency and routine safety-related duties, and thereby reduce passenger and crew injuries and fatalities in air carrier accidents. Data from 1975 through 1989 showed that approximately 38,000 air carrier passengers were aboard aircraft involved in evacuations or evacuation-related occurrences. This fact indicates potential passenger exposure to situations in which flight attendant reaction may be critical.

The FAA has determined that the proposed amendments would not affect a substantial number of small entities. The proposed amendments would have no impact on international trade for either U.S. firms doing business overseas or foreign firms doing business in the United States.

I. Introduction

This regulatory evaluation of the notice of proposed rulemaking (NPRM) on proposed flight attendant scheduled duty period limitations and rest requirements was performed in accordance with Executive Order 12291, which requires that every proposed regulation be analyzed to determine its costs and benefits. This document also contains an initial regulatory flexibility determination, which is required by law, and an international trade impact statement, which is required by the Office of Management and Budget (OMB).

The proposed amendments would establish scheduled duty period limitations and rest requirements for flight attendants as provided for by the Federal Aviation Act of 1958, as amended, which empowers and directs the Secretary of Transportation to regulate rules concerning hours of service of "airmen and other employees" in the interest of safety. The proposed rule seeks to address potential safety problems that may arise from utilizing inadequately rested flight attendants, without imposing major economic burdens or alterations to the carriers' operations.

The intent of this evaluation is to examine and quantify, to the extent practicable, the economic impact of the proposed rule. However, the FAA lacks sufficient data on aspects of potential costs of the proposal, particularly the costs of augmenting flight attendant crews to comply with the requirement for scheduling duty periods longer than 14 hours (see Appendix B for

details of this requirement). Cost estimates in this evaluation are based on the cost of updating flight crewmember recordkeeping and tracking systems to include flight attendants, and potentially by adding a range of additional flight attendant duty periods to augment cabin crews.

The FAA also lacks data specifically linking flight attendant fatigue with injuries or fatalities in past accidents. This makes the proposal's benefits difficult to quantify. However, the proposed rule, if enacted, is expected to help ensure that flight attendants are rested and alert enough to perform their safety duties and therefore help reduce fatalities and injuries to passengers and crewmembers, particularly during evacuations.

The FAA requests any additional, specific information that may help further quantify the costs and benefits of the proposal.

For a comprehensive review of the proposal, this initial regulatory evaluation should be read in conjunction with the NPRM, which provides detailed discussions on the background of the issues, and the proposed amendments.

II. Background

On December 19, 1984, and April 23, 1985, the FAA received petitions to amend the FAR to include flight and duty period limitations for flight attendants. The petitions were filed separately by the Association of Flight Attendants (AFA) and the Joint Council of Flight Attendant Unions (JCFA), respectively, but were considered jointly by the FAA because of their common subject matter.

Although the petitioners presented different guidelines for establishing flight and/or duty period limitations and rest requirements for flight attendants, both agreed that rules are necessary to protect flight attendants from excessively long work periods that could result in decreased performance in an emergency situation. In its proposal, the JCFA stated that "excessive duty hours often lead to flight attendant fatigue and can diminish their ability to adequately perform their safety function in air transportation." The petitioners noted that not all flight attendants are represented by unions and said that the unrepresented flight attendants have no protection from excessive duty hours.

The FAA denied both petitions on January 23, 1989, citing a "lack of concrete evidence showing any correlation between flight attendant duty time, flight attendant safety duties, and risk to passengers." Two bills, H.R. 638 and S. 1170, both entitled "Flight Attendant Duty Time Act," were introduced for

Congressional consideration immediately following the FAA Denial of Petition. The bills provided for the establishment of duty period limitations and rest requirements for flight attendants by requiring the FAA to initiate a rulemaking proceeding no later than 60 days after the enactment of the proposed legislation, and to promulgate final regulations no later than 240 days after the enactment of the proposed legislation. If the FAA failed to meet these deadlines, the bills would establish "fallback" duty and rest times.

The Subcommittee on Aviation of the House Committee on Public Works and Transportation held a public hearing on May 17, 1989, at which representatives from the industry, its unions, and the FAA testified on H.R. 638. At the hearing, the FAA announced that it would initiate a study to obtain data on the industry's scheduling practices that would determine the need for regulatory action.

A "Report on the Study of Current Industry Practice — Flight Attendant Flight, Duty, and Rest Times" (hereinafter referred to as the "Industry Study") was completed by the FAA on September 12, 1989. The Industry Study (a copy of which is included in this docket) reflects a review of current air carrier industry scheduling practices and actual work hours of flight attendants. The study targeted longer-than-average duty days, below-minimum rest periods, and instances of long flight hours. Certain segments of the industry were found to encounter flight

attendant duty hour problems more frequently than others because of the nature of their operations, although such problems were by no means prevalent. Nevertheless, the occasional cases of excessive duty hours and below-minimum rest revealed a basis for initiating regulatory action.

III. The Proposal

The proposed rule would establish scheduled duty period limitations and rest requirements for flight attendants under FAR Parts 121 and 135 and would add flight attendants to the Part 125 rest and recordkeeping requirements for flight crewmembers. Under Parts 121 and 135, the FAA proposes to do the following: (1) Establish maximum scheduled duty periods; (2) establish minimum scheduled rest requirements; (3) allow reduced rest with provisions for compensatory rest; (4) establish at least a 24-consecutive-hour rest period during any 7 consecutive calendar days; and (5) require records to be maintained for each flight attendant on the proposed duty period limitations and rest requirements.

The FAA believes that the proposed scheduled duty period limitations and rest requirements represent a balance between the flight attendants' need for reasonable duty hours and adequate rest in order to ensure flight safety, and the air carriers' need to schedule flight attendants efficiently while remaining competitive.

A more detailed discussion of the proposal is found in Appendix B. The following is a summary of the specific limitations proposed for FAR Parts 121 and 135:

- Maximum scheduled duty period of 14 hours
- Provided flight attendants above the minimum complement required are assigned, scheduled duty period could be to up to 20 hours
- With a scheduled duty period of up to 14 hours, the minimum scheduled rest would be 9 hours
- The 9-hour rest could be reduced to 8 hours if additional rest of 10 consecutive hours were given within 24 hours after the beginning of the reduced rest period
- With a scheduled duty period of more than 14 hours, the minimum scheduled rest would be 12 hours
- The 12-hour rest could be reduced to 10 hours if additional rest of 14 consecutive hours were given within 24 hours after the beginning of the reduced rest period
- At least 24 hours consecutive hours off during any 7 consecutive calendar days.

IV. Costs

The FAA believes that costs to most carriers in the current air carrier environment would be limited to recordkeeping and, in some cases, increasing flight attendant staffing on certain duty assignments. However, the FAA recognizes that there is a great deal of uncertainty associated with determining the costs of this action. Therefore, a range of potential costs associated with this proposal are identified to the extent feasible. At the lower end of the range are recordkeeping costs, which would be incurred by all affected operators. This lower end cost estimate assumes that a large number of carriers are already in compliance in varying degrees. The higher end of the range includes recordkeeping costs plus increased personnel costs that would be incurred in order to augment flight attendant crews. The upper end cost assumes that carriers are largely in compliance with the proposed requirements, but that a minority of carriers do schedule flight attendants for duty periods longer than 14 hours on flights with only the minimum crew required under § 121.391 and the carrier's operations specification. The FAA requests additional information with documentation, if available, on any costs that would be incurred if the proposal is adopted as a rule.

The FAA estimates that there are 83,000 active flight attendants in the air carrier industry. Approximately 81,800 (or 99 percent) of these flight attendants are employed by major or national air carriers or regional/commuter carriers that provide

scheduled service. The remaining 1,200 are employed by charter or supplemental carriers.

Costs for supplemental carriers are considered separately because the Industry Study found that those carriers experience a higher proportion of long duty periods. Therefore, supplemental carriers currently may be less in compliance with the intent of the proposed rule, and thus would face proportionately higher compliance costs than would the rest of the air carrier industry. Supplemental carriers would be affected disproportionately by any increase in staffing on certain duty assignments. Supplemental carriers frequently have geographically widespread operations, with fewer crew bases and aircraft than scheduled carriers.

Recordkeeping

The FAA estimates that all carriers would incur costs to include flight attendants in their recordkeeping systems. The actual cost of modifying the Part 121 and 135 carriers' recordkeeping system tracking flight, duty, and/or rest time for flight crewmembers and other operations personnel to include flight attendants is expected to vary from carrier to carrier. These actual costs are based on the number of flight attendants, the sophistication of the present recordkeeping system, the ability of the recordkeeping system to be adjusted to include flight attendants, and whether a system to monitor flight, duty, and/or rest times for flight attendants already exists. Carriers use automated, semi-automated, and manual recordkeeping systems to

monitor flight, duty, and rest times for operations personnel. Carriers often include flight attendants in their recordkeeping systems to ensure and monitor compliance with company or union restrictions, to maximize utilization, or for payroll purposes.

FAA cost estimates of the proposed recordkeeping requirements assume that some carriers have cumbersome manual systems, while others have sophisticated automated crew tracking systems. FAA cost estimates also take into consideration that a system to monitor duty and rest times for flight attendants may already exist, but that the system would have to be modified to include the proposed parameters. Based on FAA estimates of the hours needed to modify present recordkeeping requirements and types of recordkeeping systems, the one-time industry-wide startup cost to implement the proposed recordkeeping requirements would be approximately $5 per flight attendant. With approximately 83,000 flight attendants, the total cost would be $415,000, nondiscounted ($5 per flight attendant x 83,000 flight attendants; all monetary values in this evaluation are expressed in 1989 dollars). This would include approximately $6,000 for flight attendants employed by supplemental operators, and approximately $409,000 for the rest of the industry. The FAA estimates that flight attendants work an average of 150 duty periods per year. Because the Industry Study found that many air carriers have automated systems to monitor recordkeeping, the time for a clerical person (at $10 per hour including wages and benefits) to enter the appropriate data for each flight attendant

work day is 30 seconds. With 83,000 flight attendants working an average of 150 duty periods per year, the recurring cost to update existing flight attendant records is estimated to be approximately $1.04 million per year {[(150 duty periods per year x 83,000 flight attendants x 0.5 minutes)/60 minutes per hour] x $10 per hour}. This includes approximately $20,000 for supplemental operators, and approximately $1.02 million for the rest of the industry.

Duty and rest periods

The Industry Study found that most carriers have contracts or rules addressing duty and rest requirements for both domestic and international operations. A representative of the Air Transport Association (ATA) at the public hearing on May 17, 1989, stated that this is true for its members, who employ the majority of the industry's flight attendants. Most of the carriers reviewed during the Industry Study employed scheduled duty limitations equal to or more restrictive than those in the proposed rule. Thus, the scheduled duty period limitations contained in the proposal are not expected to have a significant impact on operators guided by union contracts or work rules.

The Industry Study showed that the proposed scheduling limitations primarily would affect supplemental carriers. Contracts and work rules indicate that most carriers, including supplementals, already make it a policy to staff longer flights with more than minimum flight attendant crews. However,

exceptions appear to exist. For example, if extra flight attendants are assigned but do not show up for work, a flight may depart with a minimum crew. A minimum crew could be used for flights on which minimum passenger service is planned. Therefore, the proposed requirement for augmented flight attendant crews is expected to affect certain carriers, but on relatively few flights.

The proposal would require the addition of one flight attendant to the minimum crew for flights in scheduled duty periods of more than 14 hours but no more than 16 hours; two more than the minimum crew for flights in scheduled duty periods of more than 16 hours but no more than 18 hours; and three more than minimum crew for flights in duty periods of more than 18 hours but no more than 20 hours.

The FAA does not have data on how often flights are scheduled for more than 14 hours but are not staffed with more than the minimum flight crew. Therefore, the FAA has limited data with which to estimate the impact of the proposal to require additional flight attendants above the minimum complement required by the air carriers' operations specifications.

The FAA is of the opinion that many flights with the minimum number of flight attendants are in airplanes that require one or two flight attendants. Some of these airplanes are flown by regional carriers. The Industry Study found that regional carriers tend to operate with few flights after midnight. The

Industry Study also found that flight attendants are often pa with flight crews and that scheduled duty periods are usually less than 14 hours. Therefore, regional carriers are not expected to require additional flight attendants in order to comply with the proposal for augmented flight attendant crews for scheduled duty periods of more than 14 hours.

The Industry Study found that the typical duty period for major air carriers ranged from 8 to 12 hours. Scheduled duty periods of more than 14 hours were found more often on international flights, when scheduled block times are longer than those for domestic flights. The FAA is of the opinion that the umber of flight attendants assigned to such flights usually exceeds the minimum complement required by the carrier's operations specifications. For example, one major carrier with extensive international routes operates a Boeing 747 with a seating configuration for which the FAR would require a minimum of eight flight attendants. The carrier assigns at least 10 flight attendants to the airplane on international routes. Another major carrier with an international route structure assigns at least eight flight attendants to its L-1011 — three flight attendants more than the FAA minimum crew complement.

The longest scheduled duty periods noted by the Industry Study tended to occur with supplemental operators. Most of these scheduled duty days were found in international operations. The Industry Study found that supplemental carriers also normally

schedule more that the minimum number of flight attendants. For example, one supplemental carrier has a policy to assign 14 flight attendants on its Boeing 747, which has a required minimum crew complement of 10 flight attendants.

The Industry Study also examined rest requirements for domestic operations as reflected in contracts and work rules. Most of the domestic operators contacted have rules that meet or are more stringent than the proposed minimum rest requirements. (Although international layovers often were found to be 24 hours or more, little information was available on air carrier scheduled rest period policies for international operations.)

In many of the instances noted in the Industry Study in which rest was found to be less than 8 hours, actual rest was found to exceed 7 hours. Hence, most instances of rest of less than 8 hours were within 1 hour of the proposed reduced rest provisions. The reduced rest provisions would provide flexibility for crew schedulers, particularly when the flight attendants assigned for a flight or series of flights are assigned with the same flight crewmembers.

The Industry Study found that most operators give flight attendants at least 24 consecutive hours of rest in any 7 consecutive days. The few operators that currently have no provision for flight attendants to receive 24 consecutive hours of rest in any 7 consecutive days could comply with the proposal by redistributing shifts rather than by hiring additional flight

attendants. If the flight attendants do not receive this proposed rest because of the air carriers' scheduling practices, crew schedulers could redistribute the flight attendants' schedules by devising shifts that are a maximum of 6 days in length. Maximum 6-day shifts would allow flight attendants to be available every day for scheduling purposes, thus reducing the possibility of shortages on a given day. If the flight attendants do not receive this proposed rest because they prefer to work 7 days or more, that practice would need to be modified.

Thus, the potential costs of the proposed scheduling limitations would be attributable mainly to the element of the proposal requiring augmented crews for longer scheduled duty periods. The air carrier industry might need the equivalent of as many as 10,000 additional scheduled duty periods per year in order to meet the proposal. Because supplemental operators were found to have longer scheduled duty periods, the FAA estimates that even though only 1,200 flight attendants are employed by supplemental operators (approximately one percent of the estimated 83,000 active flight attendants in the air carrier industry), approximately 60 percent of the additional duty periods would be scheduled by supplemental operators.

Based on an annual salary plus benefits and recurrent training costs of $17,250, the cost of a junior flight attendant per scheduled work day is estimated to be $115 ($17,250 annually

divided by 150 average duty periods per year). Based on FAA estimates of salary, benefits, and training costs, the recurring cost of an additional 6,000 scheduled duty periods for all supplemental carriers is estimated to be approximately $690,000 ($115 per flight attendant x 6,000 scheduled duty periods), nondiscounted.

The rest of the industry would account for the remaining 40 percent of the 10,000 additional duty periods. These 4,000 duty periods, at the same rate of $115 per day, would amount to approximately $460,000 per year, nondiscounted.

Based on the preceding discussion, the FAA estimates that the recordkeeping cost for supplemental operators over 15 years would be approximately $158,000, discounted. The cost for supplemental operators to assign up to 6,000 additional scheduled duty periods per year for 15 years would be approximately $5.2 million, discounted. Thus, the total cost to all supplemental operators over 15 years would range from approximately $158,000, discounted (recordkeeping only) to approximately $5.4 million, discounted (recordkeeping and additional scheduled duty periods).

The FAA estimates that the recordkeeping cost for scheduled major, national, and regional operators over 15 years would be approximately $8.1 million, discounted. The FAA estimates that the costs for these operators to assign up to 4,000 additional scheduled duty periods over 15 years would be approximately $3.5 million, discounted. Thus, the total cost to all scheduled

major, national, and regional operators over 15 years would range from approximately $8.1 million, discounted (recordkeeping) to approximately $11.6 million, discounted (recordkeeping and additional scheduled duty periods).

Therefore, over 15 years, the cost for the air carrier industry could range from $8.3 million, discounted, for recordkeeping, to $17 million, discounted, for recordkeeping and additional scheduled duty periods.

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RANGE OF ESTIMATED COSTS TO SUPPLEMENTAL OPERATORS
OVER 15 YEARS

1. Recordkeeping

Year	Effective Discount Rate *	One-Time Cost	Recurring Cost	Present Value Cost
1	0.909	$6,000	$	$ 5,454
1-15	7.606		20,000	152,120
Total				157,574

2. Up to 6,000 Additional Scheduled Duty Periods

Year	Effective Discount Rate *	Recurring Cost	Present Value Cost
1-15	7.606	$690,000	$5,248,140

3. Range of Estimated Discounted Costs

Minimum—Recordkeeping Only	Maximum—Recordkeeping and Additional Scheduled Duty Periods
$157,574	$5,405,714

*Annual effective discount rate of 10 percent; 1989 dollars.

RANGE OF ESTIMATED COSTS TO SCHEDULED OPERATORS OVER 15 YEARS

1. Recordkeeping

Year	Effective Discount Rate *	One-Time Cost	Recurring Cost	Present Value Cost
1	0.909	$409,000	$	$ 371,781
1-15	7.606		1,020,000	7,758,120
Total				8,129,901

2. Up to 4,000 Additional Scheduled Duty Periods

Year	Effective Discount Rate *	Recurring Cost	Present Value Cost
1-15	7.606	$460,000	$3,498,760

3. Range of Estimated Discounted Costs

Minimum--Recordkeeping	Maximum--Recordkeeping and Additional Scheduled Duty Periods
$8,129,901	$11,628,661

*Annual effective discount rate of 10 percent; 1989 dollars.

V. **Benefits**

Potential benefits are examined in the context of previous accident and incident experience. The accident data do not specify flight attendant fatigue as a factor in delay of evacuation or in injuries or fatalities that occurred. The accident and incident history provides a frame of reference for emergency instances in which flight attendants may have exercised their safety responsibilities in potential life-and-death situations. The FAA recognizes that this history may not be reliable in terms of specifically forecasting injuries or fatalities connected with flight attendant fatigue. Nonetheless, previous accidents and incidents are the best available indicator of future risk exposure.

A qualitative approach is used to analyze potential future benefits. This approach examines a range of factors that provide a broad perspective of potential benefits. This proposal is proactive rather than reactive. That is, the FAA is proposing to act to prevent a safety problem from occurring when the earliest symptoms appear. In this case, the symptom is excessive flight and duty time and reduced rest for flight attendants. This potentially creates a safety problem because it could impede flight attendants' performance during emergency evacuations or during routine safety duties requiring a high degree of alertness.

Flight attendants are recognized as crewmembers, which, as defined in § 1.1, means persons assigned to perform duties in an aircraft during flight time. Flight attendants are assigned essential duties under §§ 121.391, 125.269, and 135.107, which require their presence on certain passenger-carrying airplanes for safety reasons. The flight attendant's role in passenger safety has also been recognized in requiring specific initial and recurrent training in safety duties, emergency evacuation procedures, and security-related occurrences (for example, hijacking). Flight attendants perform essential safety duties including the following: (1) Knowing the location and use of emergency exits, fire extinguishers, first aid kits, flotation devices, oxygen masks, and evacuation slides; (2) knowing land and water evacuation procedures, including issuing evacuation commands, redirecting all passengers, and removing nonambulatory passengers; (3) responding to emergencies such as smoke and fire, turbulence, medical emergencies, decompressions, and hijackings; and (4) being familiar with nonemergency safety procedures, including checking emergency equipment prior to flight, ensuring that baggage is correctly stowed so that it is not an obstacle in case of an emergency, securing galleys, briefing passengers on safety equipment and procedures, and ensuring compliance with all other applicable safety regulations.

As crewmembers in passenger-carrying operations, flight attendants are also essential safety agents in accidents and incidents other than major emergencies. Such accidents and

incidents could include emergency landings, evacuations, bomb threats, and injury to people aboard the aircraft, including flight crewmembers and other flight attendants. Even though no studies have been performed to find a direct correlation between flight attendant duty time and adequate rest and flight attendant performance in accidents and incidents, a link between extreme cases of inadequate rest and performance degradation is believed to exist. The FAA is proposing a regulation aimed at preventing such inadequate rest to help minimize injuries to passengers and crewmembers over time, based on the need for flight attendants to maintain increased alertness and judgment as well as performance of gross motor skills.

In reviewing FAA and National Transportation Safety Board (NTSB) accident and incident data from 1975 through 1989, the FAA found at least 405 evacuations or evacuation-related occurrences.[1] A summary of these occurrences follows.

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[1] Evacuation-related occurrences are those for which the data does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

SUMMARY OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES
1975 THROUGH 1989

Number of Occurrences:	405
Record of Evacuation:[2]	334
Injuries	
Fatal:	820[3]
Serious:	559
Minor:	1,612
None:	37,730
Total on Board: (Includes crew)	40,719

A compilation of the totals on a yearly basis appears in Table 1 (p. A-1). A breakdown of the occurrences can be found in Table 2 (p. A-2 through A-16). The occurrences counted by the FAA in this review include accidents, emergency landings, and fires. However, this evaluation does not include accidents in which most of the people aboard were fatally injured, because in such an accident a flight attendant could provide little assistance to passengers and other crewmembers. These occurrences also do not include "false alarm" emergency landings that did not result in an evacuation.

[2] Data from the NTSB or the FAA clearly refer to an evacuation.

[3] Includes two persons who were not on board the passenger-carrying airplane.

Due to the uncertainties of ascribing specific results of evacuations to flight attendant actions, the potential benefits of the proposed rule are difficult to quantify. The 15-year record of evacuations and evacuation-related occurrences in which flight attendant response was a factor in passenger survival indicates losses approximately equivalent to $100 million per year due to injuries and fatalities. (Based on $1.5 million as the value of a statistical fatality avoided, $640,000 as the value of a statistical serious injury avoided, and $2,300 as the value of a statistical minor injury avoided.)[4] However, the FAA is of the opinion that this 15-year record of evacuations and evacuation-related occurrences is an indicator of the number of passengers annually *exposed* to emergency evacuations. This record shows that throughout the industry, over 15 years, approximately 38,000 passengers were aboard airliners that experienced evacuations or on which evacuation-related occurrences took place.[5] Approximately 2,500 of these passengers were aboard supplemental carriers.

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[4] These figures are used to provide the public and government officials with a benchmark comparison of the expected safety benefits of rulemaking actions over an extended period of time with estimated costs in dollars. In this evaluation, the monetary figure serves merely to help indicate the scale of injuries and fatalities that have occurred in evacuations and evacuation-related occurrences where flight attendant response was an important factor.

[5] Data lists numbers of passengers and crew aboard in most instances. Total number is estimated due to instances where crew and passenger totals are combined.

Evacuations may occur because of bomb threats, aircraft fires or suspected fires, takeoffs or landings in which the aircraft skids off the runway, off-airport crashes, or other reasons. Industry experience shows that regardless of whether the emergency itself turns out to be significant, evacuations themselves are potentially hazardous actions. Injuries often occur regardless of the reason for the evacuation. Such injuries may be limited to friction burns, lacerations, and abrasions during slide use, or may include fractures and more serious injuries. When the evacuation takes place amidst the stress and confusion of an actual emergency, the potential for serious injury greatly increases. Flight attendants are called upon not simply to react automatically in response to training, but also to exercise rapid judgment under conflicting pressures: avoid unnecessary evacuations, but execute evacuations without delay if warranted.

Every evacuation is unique. Smoke and/or fire may be present inside or outside the cabin, possibly blocking exits. Rain, high winds, or other environmental factors may complicate escape from the aircraft by making doors difficult to open or overwing exits potentially treacherous. The airplane may come to rest on a hill or steep angle, making certain exits especially dangerous or blocked, and certain slides unusable. Passengers may be calm and cooperative or panicky and insistent upon taking carry-on luggage with them. The passenger load may include elderly or disabled persons who require special attention. Although other factors such as aircraft configuration and the environment and

circumstances of the evacuation influence passenger egress from the airplane, flight attendants play a key role. Their response depends on training, their own injuries, degree of alertness, and the efficacy of crew communication. Examples of these types of situations are shown below:

Example No. 1

Flight attendants were credited in rescue efforts in the collision of two Boeing 747s at Los Rodeos Airport, Tenerife, on March 27, 1977. Several flight attendants were presented awards by the Secretary of the Department of Transportation for saving lives and attending to the injured after the crash, in some cases despite their own injuries.

Example No. 2

An accident in which a DC-10 overran the departure end of the runway at Los Angeles International Airport on March 1, 1978, illustrated both the flight attendants' role and the obstacles that may be encountered in evacuating an airplane. In that incident, flight attendants recognized that the deceleration rate of the airplane after aborting the takeoff was insufficient to stop on the runway, so they quickly began instructing the passengers to assume the crash position. The evacuation was complicated because exits were blocked by fire, slides burned, and the wings were dangerously slippery. (See Appendix C for a more detailed account.) The two fatalities and 85 injuries that

occurred were attributed to the evacuation sequence rather than the aircraft deceleration or impact.

Although it is difficult to assess the exact number of lives the flight attendants may have saved in these examples, it is reasonable to assume that fatalities or severity of injuries were reduced in these similar accidents as a result of the flight attendants' actions. These examples illustrate the vital role flight attendants play in passenger safety and the importance of good judgment in emergency situations. They also raise the question of whether the flight attendants would have been able to perform as well if they had been unduly fatigued because of extended duty periods or reduced rest periods.

There are other safety and security situations in which flight attendant reaction is important, but difficult to quantify. For example, in addition to the passengers involved in evacuations and evacuation-related occurrences during the 15 years that were reviewed, approximately 14,000 people were aboard the 120 aircraft on which injuries occurred in flight. Most of these injuries were the result of severe turbulence. In such circumstances, flight attendants are called upon to remain alert in order to minimize passenger exposure to loose items, unnecessary walking about the aircraft, or other risks. Such occurrences can require the attention of at least one flight attendant, and may be followed by an emergency landing during which the full attention and good judgment of flight attendants

is necessary to ensure the safety of all crewmembers and passengers. Ground injuries (for example, a fall during enplaning or deplaning) are not included in this data. A summary of these occurrences follows with a year-by-year compilation on Table 3 (p. A-17) and details in Table 4 (p. A-18 through A-20).

SUMMARY OF OCCURRENCES OF IN-FLIGHT INJURIES 1975 THROUGH 1989

Number of Occurrences:	120
Injuries	
Fatal:	1
Serious:	160
Minor:	369
None:	13,883
Total on Board:	14,413

Although the incapacitation of a flight crewmember or flight attendant could cause a potentially dangerous situation, it is not always possible to quantify the outcome of flight attendants' reactions. In the case of an incapacitated flight crewmember, the remaining flight crewmembers would need to perform an emergency landing with less than the minimum flight crew. In reviewing data from the NTSB from 1975 through 1989, the FAA found that 17 flight crewmembers and 2 flight attendants had become incapacitated during a flight. A summary of these occurrences follows; details are given in Table 5 (p. A-21).

SUMMARY OF OCCURRENCES OF CREWMEMBER INCAPACITATION 1975 THROUGH 1989

Number of Occurrences:	19
Total on Board:	2,444

Flight attendants perform other security-related functions that demand alertness and judgment, but that cannot be quantified in monetary terms. These include handling passengers who are unruly or under the influence of alcohol or drugs, passengers who are ill in flight, and incidents of depressurization.

The role of human factors in aviation safety is gaining attention and study. This extends to flight attendants, as evidenced by airlines' decisions to include flight attendants in cockpit resource management (CRM) training programs for flight crewmembers in order to improve efficiency and communication between flight and cabin crews, particularly in emergency situations.

Concern about the issue of flight attendant hours of service within NTSB and FAA is based on indications that now and in the past, duty periods occasionally may be excessively long or rest too abbreviated, and that such occurrences should be curtailed before they develop into a more generalized problem. Although current industry practice generally falls within the parameters of the proposed rule, the dynamics of the air carrier industry

are such that the cycles of expansion and concentration could lead to circumstances in which financial pressures might lead a carrier to seek to schedule cabin crews beyond these parameters, even if on a temporary basis.

Other related changes occurring within the industry include increasingly higher load factors, larger aircraft seating capacity, and longer trip lengths, as well as continued significant growth in longer haul international markets. For example, average annual passenger enplanements increased 4.4 percent from 1985 through 1989 on domestic routes, and 10.6 percent on international routes. The growth in 1989 alone was only 0.3 percent for domestic traffic, and 7.3 percent for international. However, enplanements on nonscheduled flights — including most supplemental carriers' operations and charters by other carriers — grew 6.1 percent in 1989 on domestic flights, and 14.5 percent on international flights.[6] These trends indicate that demands on flight attendants may be shifting to longer and more crowded flights.

The potential value of the proposed regulation should be considered in terms of future benefits through correcting conditions that may contribute to injuries in future accidents and incidents. The FAA has examined pertinent evacuations and other incidents over 15 years to develop a framework from which

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[6] FAA Aviation Forecasts Fiscal Years 1990-2001 (FAA-APO 90-1, March 1990).

to gauge flight attendants' potetial contributions to aviation safety. If flight attendants are protected through scheduled duty period limitations and rest requirements from excessive fatigue, they may be able to contribute to decreased injuries or fatalities in some future accident or incident, or to contribute to safety in less dramatic circumstances, through alertness and vigilance in routine safety duties.

VI. Conclusion

This proposed rulemaking is based on the premise that overly fatigued flight attendants may suffer a performance degradation in certain situations involving routine or emergency safety-related tasks. This rulemaking project aims to minimize such performance degradation in potential future accidents and incidents in which flight attendant judgment and action can affect the outcome.

The FAA recognizes the difficulty of evaluating the costs and benefits of the proposed regulation in monetary terms. As a result of this difficulty, the FAA solicits input from the aviation community for any information related to the costs and benefits of the proposal. Based on qualitative evaluation of the proposal, the FAA believes that the proposal is cost-beneficial. The FAA concludes that the proposed rule changes to Parts 121, 125, and 135 contained in this Notice are warranted because they would contribute to an overall enhancement of transport category airplane safety and utility that would both promote and enhance the U.S. air transportation system.

VII. Initial Regulatory Flexibility Determination

Congress enacted the Regulatory Flexibility Act (RFA) of 1980 (P.L. 96-354) to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The RFA requires agencies to review proposed rules that may have a significant impact on a substantial number of small entities.

The Regulatory Flexibility Criteria and Guidance, FAA Order 2100.14A, sets guidelines for determining whether small entities are significantly affected by regulations. The fleet size for an operator of aircraft for hire to be considered a small entity is nine or fewer aircraft. The threshold annualized cost levels for operators of aircraft for hire in 1989 dollars are $103,000 for scheduled operators whose fleets have aircraft with seating capacities of more than 60, $57,000 for scheduled operators whose fleets have aircraft with seating capacities of 60 or less (other scheduled operators), and $4,000 for unscheduled operators. The proposals in the NPRM would affect air carriers that provide passenger-carrying operations in aircraft for which flight attendants are required. Other types of aviation companies would not be affected.

According to FAA records of small entity air carriers that provide passenger-carrying operations in aircraft that require flight attendants, there are 21 operators that could be affected by the proposal. Of these 21 operators, 10 are scheduled

operators whose aircraft have seating capacities of more than 60, 5 are other scheduled operators, and 6 are unscheduled operators.

As discussed in the cost section of this evaluation, the FAA estimates that increased personnel costs for augmented flight attendant crews for the purpose of complying with the proposed amendments would disproportionately affect supplemental, or charter, operations.

The FAA estimates that because scheduled operators whose aircraft have seating capacities of more than 60 do operate some international charter flights, such operators may incur additional cabin crew costs. As noted earlier, some unscheduled operators provide international charter operations.

As noted above the threshold annualized cost levels in 1989 dollars is $103,000 for scheduled operators whose fleets have aircraft with seating capacities of more than 60, $57,000 for scheduled operators whose fleets have aircraft with seating capacities of 60 or less (other scheduled operators), and $4,000 for unscheduled operators. The FAA estimates that the cost for the 10 scheduled operators whose aircraft have seating capacities of more than 60 and 5 other scheduled operators (all of which are small entities) to comply with the proposal, if adopted, would be less than $103,000 or $57,000 annually. However, the FAA estimates that the six unscheduled operators that are small entities could incur costs more that $4,000 annually. Therefore, these operators could be affected by

the proposals. However, under the guidelines presented in FAA Order 2100.14A, the FAA has determined that the proposed rule would not affect a substantial number of small entities — that is, at least 11 and more than one-third of the 21 small entities subject to the proposed rule. Therefore, the FAA has determined that a regulatory flexibility analysis is not necessary.

VIII. International Trade Impact Statement

The FAA has determined that the proposed amendments to Parts 121, 125, and 135, if adopted, would not have a significant impact on international trade. The proposals are expected to have no impact on trade opportunities for U.S. firms doing business overseas or foreign firms doing business in the United States. The proposed rule would primarily affect U.S. operators of aircraft for hire that provide both domestic and international service. Furthermore, the proposed amendments are consistent with section 1102(a) of the Federal Aviation Act of 1958, as amended, which requires the FAA to exercise and perform its power and duties consistently with any obligation assumed by the United States in any agreement that may be in force between the United States and any foreign country or countries.

Appendix A

Data Tables

TABLE 1

COMPILATION OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*

1975 THROUGH 1989

Year	Total Number of Occurrences	Record of Evacuation**	INJURIES Fatal	Serious	Minor	None	Total on Board
1975	28	24	122	64	120	2,393	2,699
1976	20	18	41	122	58	1,696	1,917
1977	24	23	392	96	106	1,736	2,330
1978	25	24	15	75	222	2,515	2,827
1979	32	25	80	55	66	2,496	2,697
1980	17	14	0	9	96	1,544	1,649
1981	16	14	0	4	47	1,657	1,708
1982	23	16	2	6	95	2,019	2,122
1983	33	28	2	4	46	3,167	3,218
1984	26	22	0	9	135	2,428	2,572
1985	28	25	0	6	132	3,722	3,860
1986	31	26	1	9	124	3,419	3,552
1987	41	37	28	34	98	3,237	3,397
1988	33	21	15	50	186	3,211	3,462
1989	28	17	122	16	81	2,490	2,709
Total	405	334	820	559	1,612	37,730	40,719
Average	27	22	55	37	107	2,515	2,715

* Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

** Data from the National Transportation Safety Board (NTSB) or the Federal Aviation Administration (FAA) clearly refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 1 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
7-0791	01/03/75	DC10	YES				120	120	108	12
7-0792	01/06/75	B727	YES				60	60	53	7
7-0793	01/18/75	B727	YES			1	79	80	73	7
7-0787	03/05/75	B727	YES			1	31	32	26	6
1-0001	03/31/75	B737	YES		1	3	95	99	93	6
1-0014	06/13/75	FH227					27	27	24	3
1-0019	06/14/75	L1011	YES		1		242	243	230	13
7-0788	06/18/75	B727	YES			2	99	101	94	7
7-0794	06/23/75	CVR	YES				28	28	25	3
1-0006	06/24/75	B727		112	12			124	116	8
4-0007	07/24/75	B727	YES				56	56	50	6
7-0795	07/24/75	B727	YES				55	55	48	7
7-0789	08/02/75	DC9	YES				75	75	71	4
1-0012	08/07/75	B727	YES		15	37	82	134	127	7
1-0029	08/16/75	B727					90	90	83	7
7-0796	08/18/75	CVR	YES				40	40	37	3
1-0027	08/23/75	B727	YES				117	117	109	8
1-0032	08/25/75	DC10	YES		3	18	209	230	216	14
1-0013	08/30/75	F27		10	20		2	32	28	4
7-0790	10/11/75	B727	YES			2	88	90	83	7
1-0037	10/16/75	DC10	YES		1	10	121	132	119	12
4-0028	11/07/75	DC9	YES				33	33	28	5
1-0021	11/12/75	DC10	YES		2	30	107	139	128	11
1-0022	11/12/75	B727	YES		1	7	131	139	131	8
7-0797	11/19/75	B707	YES				46	46	39	7
7-3603	12/16/75	B747	YES		2	9	110	121	101	20
1-0038	12/22/75	DC8	YES				125	125	116	9
1-0044	12/22/75	B707	YES		6		125	131	123	8
				122	64	120	2,393	2,699	2,479	219

*Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

**Data from the National Transportation Safety Board (NTSB) or the Federal Aviation Administration (FAA) clearly refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 2 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
1-0024	01/02/76	DC10	YES		1		375	376	364	12
7-0960	01/03/76	B737	YES				46	46	40	6
7-0961	01/13/76	B707	YES			2	83	85	77	8
7-0962	01/15/76	B747	YES			2	225	227	212	15
7-0965	01/17/76	B727	YES			3	63	66	59	7
1-0002	01/17/76	B727	YES		2		54	56	49	7
1-0015	02/08/76	DC6	YES	3		3		6	1	5
1-0012	02/16/76	B727	YES		1	2	117	120	113	7
1-0003	04/05/76	B727	YES	1	11		38	50	43	7
7-0969	04/22/76	B727	YES			4	97	101	95	6
1-0028	04/04/76	B707					79	79	71	8
1-0005	04/27/76	B727	YES	37	19	32		88	81	7
7-0968	05/03/76	DC8	YES				49	49	41	8
7-0967	05/11/76	DC9	YES				90	90	85	5
1-0011	06/23/76	DC9	YES		86		20	106	102	4
7-0964	08/24/76	B707	YES			1	146	147	139	8
7-0970	08/25/76	CVR	YES				28	28	25	3
1-0022	11/12/76	DC9					59	59	55	4
1-0020	11/16/76	DC9	YES		2	9	75	86	81	5
7-0972	12/21/76	L188	YES				52	52	47	5
				41	122	58	1,696	1,917	1,780	137

Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

* Data from the NTSB or the FAA clearly refer to an evacuation.

Sources: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 3 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
7-2006	01/05/77	DC9	YES			9	32	41	37	4
4-0016	01/12/77	B707	YES			3	66	69	62	7
1-0013	01/16/77	DC8	YES		7	15	79	101	93	8
7-2001	02/03/77	B727	YES				38	38	31	7
7-2007	02/24/77	L1011	YES				147	147	137	10
4-0002	03/03/77	CVR	YES				20	20	17	3
1-0026	03/27/77	B747	YES	326	34		36	396	380	16
1-0010	04/04/77	DC9		62	22		1	85	81	4
4-0008	04/05/77	B707	YES			1	51	52	45	7
7-2009	04/11/77	DC8	YES			2	134	136	127	9
7-2187	05/11/77	B727	YES				13	13	7	6
1-0025	05/16/77	S61L	YES	4	1	3	16	24	21	3
7-2011	05/22/77	DC10	YES			18	141	159	148	11
7-2012	05/26/77	YS11	YES				9	9	5	4
7-2168	06/07/77	B727	YES			2	32	34	28	6
7-2015	06/27/77	CVR	YES				49	49	46	3
7-2003	07/17/77	DC10	YES			4	262	266	253	13
4-0007	07/28/77	DC10	YES			23	185	208	193	15
7-2004	08/27/77	B720	YES			13	43	56	49	7
7-2017	09/12/77	CVR	YES			1	8	9	6	3
7-2018	10/02/77	YS11	YES			1	19	20	16	4
1-0019	10/02/77	DC8	YES		32		187	219	209	10
7-2019	10/17/77	B727	YES			10	67	77	70	7
7-2005	12/31/77	B707	YES			1	101	102	96	6
				392	96	106	1,736	2,330	2,157	173

A-4

*Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

**Data from the NTSB or the FAA clearly refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 4 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
7-2230	01/10/78	B727	YES				103	103	96	7
7-2220	01/18/78	B727	YES				76	76	70	6
7-2221	01/27/78	B727	YES				111	111	104	7
1-0001	03/01/78	DC10	YES	2	29	56	113	200	186	14
1-0007	03/11/78	L188					8	8	5	3
7-2222	03/13/78	L1011	YES				210	210	198	12
7-2231	03/21/78	DC10	YES			3	217	220	209	11
1-0006	05/08/78	B727	YES	3	11	21	23	58	52	6
1-0011	05/21/78	B727	YES		3		101	104	98	6
1-0010	07/09/78	BAC111	YES		1	14	62	77	73	4
7-2232	07/14/78	B707	YES			3	102	105	97	8
7-2233	07/17/78	DC8	YES				228	228	219	9
7-2234	07/21/78	DC9	YES			1	106	107	103	4
7-2223	07/25/78	BAC111	YES				25	25	22	3
1-0015	07/25/78	GV580	YES		3		41	44	40	4
7-2236	08/08/78	DC10	YES			55	206	261	248	13
7-2237	08/12/78	DC8	YES			5	81	86	79	7
7-2224	08/26/78	B737	YES			4	106	110	104	6
7-2225	09/03/78	B727	YES			3	61	64	58	6
7-2238	09/19/78	B727	YES				106	106	100	6
1-0022	10/04/78	B727	YES		4	6	100	110	103	7
7-2239	10/06/78	DC9	YES		1		84	85	80	5
7-2240	10/22/78	B727	YES			1	108	109	102	7
7-2241	11/24/78	F27	YES				26	26	23	3
1-0017	12/28/78	DC8	YES	10	23	50	111	194	181	13
				15	75	222	2,515	2,827	2,650	177

Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

Data from the NTSB or the FAA clearly refer to an evacuation.

Sources: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 5 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
1-0019	01/05/79	L188A	YES				15	15	9	6
7-2243	01/06/79	B727	YES				80	80	72	8
4-0002	01/12/79	L1011					237	237	227	10
1-0011	02/12/79	M298	YES	2	8	15	0	25	22	3
4-0005	03/02/79	B727					84	84	77	7
5-0035	03/03/79	DHC7					51	51	49	3
3-2479	03/10/79	M262	YES	3		4	0	7	4	3
7-2246	03/31/79	CV880	YES				32	32	29	3
4-0008	04/10/79	B707	YES				95	95	87	8
1-0013	04/18/79	S61	YES	3	13	2	0	18	15	3
1-0006	05/27/79	DC8	YES		4		130	134	125	9
7-2249	05/30/79	DC9	YES				118	118	111	7
7-2250	06/03/79	B727	YES			3	118	121	113	8
7-2226	06/04/79	DC8	YES			1	158	159	146	13
7-2251	06/10/79	DC8	YES				145	145	135	10
7-2252	06/13/79	B737	YES				84	84	79	5
7-2253	06/14/79	B737	YES				61	61	56	5
1-0014	06/24/79	L1011	YES		2	2	95	99	87	12
7-2256	07/01/79	B727	YES			1	135	136	129	7
1-0015	07/15/79	L1011	YES		2		216	218	206	12
4-0013	07/19/79	B737	YES			3	102	105	100	5
7-2258	07/22/79	F27	YES				19	19	16	3
7-2260	07/27/79	DC9	YES				21	21	16	5
5-0046	08/06/79	SD330					20	20	17	3
1-0021	08/07/79	B727					43	43	36	7
7-2261	08/16/79	B737	YES				92	92	88	4
7-2262	09/09/79	B737	YES				108	108	103	5
1-0025	10/14/79	DC8					147	147	138	9
1-0026	10/31/79	DC10	YES	72	15	1	1	89	76	13
1-0009	11/16/79	M404	YES		10	34	0	44	41	3
1-0024	11/24/79	CV440			1		45	46	43	3
7-2265	12/04/79	DC9	YES				44	44	39	5
				80	55	66	2,496	2,697	2,491	207

*Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures. Data from the NTSB or the FAA cited by refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 6 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
7-2268	01/27/80	B737	YES			1	43	44	38	1
7-2269	02/28/80	B727	YES				33	33	25	8
1-0015	03/17/80	DC9			1		49	50	46	4
4-0005	04/18/80	YS11	YES				22	22	18	4
3-0914	06/03/80	SD330					9	9	6	3
7-2272	06/08/80	L1011	YES			3	149	152	138	14
7-2273	06/15/80	DC9	YES			11	125	136	132	4
4-0009	07/13/80	DC8	YES			3	165	168	158	10
7-2227	09/15/80	DC9	YES				48	48	44	4
1-0016	09/16/80	DC10	YES		1	18	215	234	217	17
5-0048	09/16/80	N262	YES				22	22	19	3
1-0018	10/06/80	B737					79	79	73	6
7-2275	11/08/80	L1011	YES				162	162	150	12
1-0013	11/11/80	B727	YES		2	5	30	37	30	7
1-0002	11/21/80	B727	YES		3	28	42	73	67	3
7-2229	11/30/80	B707	YES			3	130	133	125	8
1-0014	12/29/80	DC8	YES		2	24	221	247	238	9
					9	96	1,544	1,649	1,524	117

*Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures. **Data from the NTSB or the FAA clearly refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 7 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD	CREW ON BOARD
7-2850	01/23/81	DC9	YES				63	63	59	4
1-0011	01/31/81	B727					131	131	124	7
1-0024	02/17/81	B737	YES		4	29	77	110	105	5
7-2852	03/08/81	DC9	YES			2	87	89	84	5
7-2853	03/16/81	DC10	YES			4	358	362	349	13
4-0026	04/08/81	B727	YES				72	72	66	6
4-0001	04/09/81	B727	YES				98	98	91	7
4-0004	04/13/81	YS11	YES				38	38	34	4
1-0001	04/18/81	YS11	YES				39	39	36	3
7-2848	05/21/81	B737	YES				101	101	96	5
7-2857	06/24/81	B727	YES				145	145	138	7
7-2849	07/08/81	B747	YES			9	212	221	203	18
7-2859	07/22/81	B727	YES				93	93	87	6
1-0014	08/25/81	HS748					25	25	22	3
7-2860	10/13/81	B727	YES			3	86	89	82	7
7-2861	12/12/81	B727	YES				32	32	25	7
					4	47	1,657	1,708	1,601	107

*Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation, but the circumstances appeared to have warranted an evacuation or emergency procedures. Data from the NTSB or the FAA clearly refer to an evacuation.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 8 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
CA82AA013	01/23/82	DC10	YES	2	4	24	182	212	200	12
CA82AA014	02/03/82	DC10	YES		1		154	155		
AX82IA075	02/15/82	B737					119	119		
CA82AA015	02/16/82	YS11	YES			3	36	39	36	3
IA82FA051	02/17/82	B727	YES		1	1	51	53		
AX82IA103	03/10/82	DC9	YES				68	68	62	6
7-3006	03/11/82	DC9	YES				30	30	27	3
7-3007	03/12/82	DC3	YES				33	33	30	3
TW82DA139	04/18/82	B727					68	68		
EN82IA090	05/10/82	G159C					21	21		
HI82IA179	05/21/82	BAC111					48	48		
AX82FA195	05/26/82	DC10	YES			25	113	138		
7-3009	07/14/82	DC9	YES			1	79	80	75	5
KC82IA143	08/12/82	B737				33	0	33		
7-3010	08/18/82	DC9	YES				28	28	25	3
7-3011	08/20/82	CVR	YES				28	28	25	3
AX82IA309	08/21/82	DC10	YES				393	393	380	13
7-3012	09/08/82	B737	YES			1	72	73	68	5
7-3118	10/17/82	DC9	YES			3	124	127	121	6
CA83IA002	10/18/82	DC9	YES			1	63	64	60	4
7-3014	10/29/82	DC9	YES			3	142	145	139	6
IA83FA036	11/27/82	B707					116	116		
HI83IA063	12/18/82	DC9					51	51		
				2	6	95	2,019	2,122	1,248	72

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***Compiled data does not in all cases list crew on board seperately from passengers on board.

Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 9 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
CA83AA013	01/09/83	CV580	YES	1	1	2	29	33		
2-3251	02/04/83	B727	YES				98	98	91	7
IA83IA075	02/15/83	B727	YES			7	67	74	67	7
CA83IA075	03/23/83	B737	YES		1		95	96	91	5
7-3248	03/25/83	SD360	YES				26	26	23	3
7-3211	04/26/83	B737	YES				46	46	42	4
IA83AA136	05/05/83	L1011					172	172		
7-3527	05/10/83	B737	YES				22	22	17	5
7-3209	05/15/83	YS11	YES				13	13	9	4
TL83IA197	05/23/83	B737	YES				59	59	54	5
AX83IA257	05/28/83	DC9					86	86		
EA83IA116	06/03/83	B727	YES				133	133		
HI83FA251	06/11/83	B727	YES		2	15	125	142		
7-3202	06/12/83	B747	YES			2	406	408	391	17
AX83IA302	06/24/83	DC9	YES			6	80	86	81	5
IA83IA165	06/25/83	DC9					77	77		
7-3270	07/30/83	CVR	YES				53	53	48	5
7-3557	08/12/83	B727	YES				144	144	137	7
7-3269	08/13/83	DC8	YES			2	263	265	256	9
IA83IA210	08/21/83	DC10					289	289		
HI83IA425	09/13/83	FH227	YES				25	25	22	3
TW83IA438	09/23/83	B727	YES			2	111	113	95	8
TW84IA007	10/05/83	B727	YES			6	66	72	66	6
IA84IA102	10/19/83	B727	YES				73	73	67	6
7-3296	11/11/83	SD330	YES				10	10	7	3
1-3323	11/11/83	B727	YES			1	158	159	152	7
7-3354	11/24/83	B737	YES				36	36	31	5
7-3295	12/02/83	F227	YES				23	23	20	3
7-3293	12/12/83	CVR	YES				44	44	41	3
KC84IA040	12/18/83	DC9					47	47		
7-3613	12/19/83	CVR	YES				33	33	29	4
CA84AA012	12/20/83	DC9	YES	1		2	84	86	81	5
AX84IA119	12/29/83	B707	YES			1	174	175	169	7
				2	4	46	3,167	3,218	2,087	143

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Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 10 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
7-3441	01/05/84	B737	YES			1	42	43	38	5
DCA84AA014	01/13/84	F27	YES		1	14	9	24	21	3
7-3449	01/29/84	B727	YES				122	122	115	7
FTW84IA135	02/15/84	YS11	YES				20	20	16	4
7-3457	02/15/84	B727	YES			1	150	151	145	6
MIA84IA135	02/17/84	DC3					5	5		
7-3460	02/17/84	SWM	YES				35	35	32	3
7-3570	02/28/84	DC10	YES		1	11	165	177	163	14
7-3626	03/18/84	B727	YES				109	109	102	7
ATL84FA084	05/17/84	B727	YES		1	12	136	149	142	7
7-3493	05/23/84	DC9	YES			9	123	132	125	7
MIA84IA172	05/24/84	B727					125	125		
7-3485	06/13/84	B727	YES			3	83	86	79	7
DCA84AA02E	06/13/84	DC9	YES			10	46	56	51	5
NYC84IA225	06/27/84	B737	YES			4	119	123	116	7
DEN84IA209	07/03/84	B727					75	75		
7-3503	07/15/84	L1011	YES			33	148	181	170	11
MIA84IA242	08/25/84	DC9	YES				96	96		
7-3728	10/02/84	B737	YES				56	56	51	5
DCA85IA001	10/14/84	DC9	YES				77	77	71	6
7-3718	10/28/84	DC9	YES				59	59	54	5
7-3718	10/29/84	DC9	YES				73	73	68	5
DCA85AA003	11/16/84	B747	YES		3	37	375	415	402	13
7-3710	11/16/84	B727	YES		1		128	129	123	6
SEA85IA024	11/29/84	F227	YES				15	15		
DCA85AA006	12/16/84	CV440			2		37	39		
					9	135	2,428	2,572	2,084	133

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Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 11 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
)FO85IA024	03/04/85	L1011				2	276	278		
7-3654	03/06/85	B727	YES				124	124	117	7
7-3768	03/20/85	B737	YES			4	100	104	100	4
)FO85IA035	04/12/85	B737	YES				107	107	102	5
)CA85IA019	04/25/85	B747	YES			42	439	461	461	20
7-3664	04/28/85	B737	YES			1	132	133	128	5
7-3770	04/30/85	B727	YES			2	53	55	48	7
	05/04/85	DHC7	YES				31	31	28	3
)HI85IA212	05/27/85	B727	YES				121	121		
7-3771	06/09/85	B727	YES				83	83	77	6
)CA85AA027	06/27/85	DC10	YES		3	29	238	270	257	13
7-3883	07/08/85	DC10	YES			5	347	352	339	13
	07/13/85	DC10	YES				14	14	10	4
7-3887	07/21/85	DC9	YES				15	15	10	5
7-3803	07/31/85	B747	YES			11	489	500	484	16
)FO85IA065	08/11/85	B727					78	78		
7-3870	08/15/85	YS11	YES				48	48	44	4
7-3667	08/19/85	YS11	YES		1	4	27	32	28	4
	08/27/85	B737	YES				8	8	5	3
)TW85IA341	09/03/85	DC10	YES		1	30	158	189	178	11
)HI85IA369	09/09/85	F27	YES		1		31	32	29	3
7-3894	09/18/85	F27	YES				9	9	6	3
)NC85MA183	09/25/85	B737				1	20	21		
)TW86IA020	10/25/85	L1011	YES			1	225	226	213	13
7-3904	10/30/85	B727	YES				155	155	148	7
7-3774	11/10/85	DC9	YES				133	133	126	7
7-3889	11/18/85	B757	YES				100	100	93	7
7-3910	12/25/85	DC10	YES				161	161	150	11
					6	132	3,722	3,860	3,181	181

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Sources: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 12 of 16)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
ATL86IA054	01/09/86	B727	YES				38	38	31	7
DCA86AA014	01/17/86	B727					131	131		
SEA86LA044	01/19/86	B727	YES		3	5	144	152	144	8
MIA86IA066	01/27/86	B747	YES			16	224	240	225	15
CHI86IA083	02/06/86	B727	YES			1	55	56	50	6
NYC86FA076	02/15/86	L1011	YES		1	14	238	253		
DCA86AA018	02/21/86	DC9				1	22	23		
ATL86LA090	03/12/86	B727	YES		1	4	65	70	63	7
ATL86IA093	03/13/86	DC9					79	79		
MIA86IA098	03/16/86	B727	YES				140	140	134	7
NYC86IA093	03/26/86	B727	YES			2	94	96	90	6
7-3940	04/04/86	B737	YES			2	112	114	109	5
CHI86FA119	04/08/86	B737				1	113	114		
	04/15/86	B737	YES			5	68	73	68	5
CHI86IA121	04/17/86	B727	YES				102	102		
FTW86IA078	05/07/86	DC10	YES			4	270	274	263	11
7-3964	05/19/86	DHC7	YES				40	40	37	3
	05/21/86	B737	YES			1	106	107	101	6
ATL86IA144	05/23/86	B727	YES			3	129	132	122	10
FTW86IA093	05/25/86	B727	YES			2	83	85		
7-3979	06/21/86	B727	YES			1	66	67	60	7
	07/13/86	L1011	YES			13	344	357	344	13
MIA86IA213	07/19/86	B727	YES				107	107	99	8
DEN86IA235	08/21/86	L1011	YES			14	225	239	228	11
7-4008	09/29/86	CV580	YES				43	43	40	3
	10/05/86	B727	YES				167	167	160	7
7-4014	10/22/86	BAC111	YES				20	20	16	4
DCA87AA006	10/25/86	B737	YES		3	31	85	119		
CA87MA0108	11/06/86	B727		1	1	2	20	23		
7-4016	11/09/86	BAC111	YES			1	81	82	78	4
	12/22/86	SD330	YES			1	8	9	6	3
				1	9	124	3,419	3,552	2,468	156

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ta from the NTSB or the FAA clearly refer to an evacuation.

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Source: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES* 1975 THROUGH 1989 (Page 13 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
	01/01/87	DC9								
NYC87IA087	01/03/87	B737	YES			2	115	117		
MIA87IA078	01/28/87	BAC111	YES			10	98	108	111	6
CHI87FA081	02/11/87	B747	YES				38	38	103	5
DEN87IA059	02/25/87	B737			3	16	222	241		
	03/13/87	B727	YES				48	48		
	03/18/87	DC9	YES				47	47		
FTW87FA080	03/24/87	CV580					54	54	40	7
CHI87MA101	03/25/87	DC10	YES				11	11	49	5
LAX87DJA05	04/10/87	YS11	YES		1	5	171	177		
	04/26/87	B727	YES		1	3	39	43	39	4
	04/30/87	G159	YES				157	157	150	7
	05/15/87	DC9	YES				8	8	5	3
	05/30/87	B727	YES				69	69	64	5
NYC87IA167	06/06/87	YS11	YES				129	129	119	10
ATL87IA167	06/11/87	B737					23	23	19	4
LAX87LA243A	06/22/87	B737	YES				77	77		
SEA87IA127	06/28/87	BAe146	YES				81	81		
	07/07/87	B727	YES			1	81	82	76	5
	08/06/87	B737	YES			1	150	151	78	4
DCA87RA047	08/16/87	B767	YES			1	75	76	144	7
CHI87NA194	08/22/87	B767	YES			1	181	182	71	5
	08/31/87	SD330	YES			3	178	181	173	9
CHI87IA201	09/02/87	DC8	YES				22	22	172	9
MIA87IA237	09/02/87	B727	YES			1	120	121	19	3
	09/05/87	BAe146	YES			4	36	40	113	8
	09/07/87	B737	YES			1	14	15	32	8
	09/21/87	CV580	YES				44	44	11	4
	09/30/87	B737	YES				18	18	38	6
BFO88IA001	10/03/87	F28	YES			8	86	94	15	3
	10/06/87	B737	YES				52	52	89	5
	10/06/87	B727	YES				70	70	48	4
	10/28/87	B727	YES				115	115	64	6
	10/28/87	DC9	YES				48	48	109	6
DCA88RA002	11/07/87	DC10	YES				67	67	42	6
DCA88MA004	11/15/87	DC9	YES			7	113	120	62	5
	11/21/87	B727	YES	28	28	25	1	82		
LAX88FA057	11/25/87	B737	YES			4	94	98	91	7
	12/13/87	DC9	YES		1	1	142	144	138	6
	12/26/87	SF340	YES				27	27	21	6
MIA88MA070	12/27/87	DC9	YES				13	13	10	3
						4	103	107	103	4
				28	34	98	3,237	3,397	2,418	185

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* Compiled data does not in all cases list crew on board separately from passengers on board.

Sources: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 14 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
	02/02/88	SF340	YES			3	21	24	21	3
N88FA061	02/02/88	CV580				2	2	4		
A88HZ002	02/03/88	MD80				2	121	123		
A88IA065	03/20/88	B727	YES				78	78	64	14
I88IA088	03/27/88	B727				24	129	153	146	7
	04/07/88	B737	YES			5	118	123	118	5
	04/10/88	F27	YES			2	20	22	19	3
O88FA036	04/14/88	F28				1	61	62		
A88MA052	04/15/88	DHC8	YES		4	27	9	40	37	3
A88WA161	04/16/88	B757	YES		1		192	193		
L88IA147	04/17/88	B737				2	106	108		
A88MA054	04/28/88	B737		1	3	4	87	95		
	05/11/88	DC9	YES				46	46	41	5
	05/20/88	SF340	YES				25	25	22	3
W88NA106	05/21/88	DC10	YES		2	6	246	254	240	14
W88NA109	05/24/88	B737					45	45		
A88IA108	06/12/88	B727	YES			7	75	82	75	7
	07/14/88	B727	YES				131	131	125	6
A88IA240	08/01/88	MD88					93	93		
	08/08/88	B727	YES				134	134	127	7
C88FA154	08/10/88	B737	YES		5	5	97	107	101	6
I88FA223	08/27/88	B727				7	61	68		
A88MA072	08/31/88	B727		14	34	60		108		
N88NA203	09/12/88	DC10	YES			1	206	207	197	10
	09/14/88	SF340	YES				17	17	14	3
W88IA165	09/21/88	B727	YES			4	84	88	81	7
C88LA246	09/21/88	B747			1	8	117	126		
	09/29/88	B757	YES				128	128	121	7
	10/09/88	ATR42	YES				41	41	38	3
	10/24/88	B727	YES				81	81	74	7
A89IA016	10/24/88	A300	YES			2	272	274		
C89IA024	11/15/88	DC9					106	106		
A89IA043	11/27/88	A300	YES			14	262	276	267	9
				15	50	186	3,211	3,462	1,928	129

evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

to from the NTSB or the FAA clearly refer to an evacuation.

supplied data does not in all cases list crew on board separately from passengers on board.

Sources: NTSB and FAA

TABLE 2

BREAKDOWN OF EVACUATIONS AND EVACUATION-RELATED OCCURRENCES*
1975 THROUGH 1989 (Page 15 of 15)

FILE NUMBER	DATE	MODEL OF AIRCRAFT	RECORD OF EVACUATION**	FATALITIES	SERIOUS INJURIES	MINOR INJURIES	NO INJURIES	TOTAL ON BOARD	PASSENGERS ON BOARD***	CREW ON BOARD***
MIA89WA063	01/07/89	A310	YES			4	202	206	196	10
FTW89IA038	01/09/89	DC9				1	62	63		
FTW89IA053	02/21/89	DC9	YES			2	47	49	44	5
DCA89MA027	02/24/89	B747		9	9	23	300	341		
	03/10/89	BAC111	YES				47	47	43	4
FTW89IA067	03/14/89	B727	YES			7	91	98	91	7
LAX89LA144	04/03/89	B767	YES		1	2	215	218	209	9
	04/08/89	CVAC	YES				46	46	43	3
DEN89FA123	05/28/89	MD80				2	48	50		
	06/18/89	B737	YES			6	96	102	96	6
DCA89MA063	07/19/89	DC10		111	6	4	177	298		
ATL89IA187	08/02/89	B737					106	106		
NYC89IA187	08/10/89	B727				2	54	56		
	08/17/89	EMB120	YES				9	9	6	3
CHI89FA183	09/12/89	MD80				2	108	110		
DCA89MA074	09/20/89	B737	YES	2			60	62		
MKC89FA202	09/30/89	F27					32	32		
	10/07/89	DC9	YES				52	52	46	6
DCA90MA002	10/14/89	B727	YES			10	17	27		
	10/15/89	SF340	YES				22	22	19	3
	10/17/89	DC9	YES				104	104	99	5
DEN90IA012	10/18/89	DC9	YES			1	103	104		
	10/19/89	CV580	YES				41	41	38	3
DEN90IA016	10/27/89	B737					40	40	35	5
	10/31/89	B727	YES				74	74	68	6
	11/20/89	A300	YES			6	163	169	160	9
ATL90IA033	11/28/89	B727					53	53		
LAX90FA061	12/30/89	B737				9	121	130		
				122	16	81	2,490	2,709	1,193	84

Evacuation-related occurrences are those for which the record does not clearly state whether an evacuation occurred, but the circumstances appeared to have warranted an evacuation or emergency procedures.

* Data from the NTSB or the FAA clearly refer to an evacuation.

** Compiled data does not in all cases list crew on board separately from passengers on board.

Source: NTSB and FAA

TABLE 3

COMPILATION OF OCCURRENCES OF IN-FLIGHT INJURIES
1975 THROUGH 1989

Year	Number of Occurrences	INJURIES Fatal	Serious	Minor*	None	Total on Board
1975	13		16		1,874	1,890
1976	8		9		677	686
1977	10		20		725	745
1978	8		12		1,084	1,096
1979	4		5		388	393
1980	6		9		424	433
1981	7		14		730	744
1982	7		11	57	829	897
1983	7		10	41	743	794
1984	6		5	10	1,022	1,037
1985	6		7	31	346	385
1986	9		13	50	1,108	1,171
1987	10	1	10	81	1,163	1,254
1988	13		10	43	1,642	1,695
1989	6		9	26	1,128	1,193
Total	120	1	160	369	13,883	14,413
Average	8	0.07	11	46	926	961

* Minor injuries are not available before 1982.

Source: National Transportation Safety Board

TABLE 4

BREAKDOWN OF OCCURRENCES OF IN-FLIGHT INJURY 1975 THROUGH 1989
(Page 1 of 3)

NTSB NUMBER	DATE	MODEL OF AIRCRAFT	FATALITIES	INJURIES SERIOUS	INJURIES MINOR	INJURIES NONE	TOTAL ON BOARD
1-0043	03/13/75	DC10		1		126	127
1-0004	03/21/75	DC8		1		178	179
1-0010	04/26/75	L1011		1		252	253
1-0011	06/20/75	CV580		1		52	53
1-0018	07/12/75	B707		1		93	94
1-0033	07/12/75	B747		1		328	329
1-0030	08/06/75	B707		1		100	101
1-0015	08/08/75	DC8		1		101	102
1-0023	09/15/75	B747		1		168	169
1-0028	09/22/75	DC8		1		110	111
1-0034	11/03/75	DC10		2		170	172
1-0024	11/26/75	DC10		3		188	191
1-0045	12/22/75	B727		1		8	9
				16		1874	1890
1-0008	02/16/76	B727		1		82	83
1-0004	02/22/76	B727		1		82	83
1-0007	03/03/76	B727		1		92	93
1-0013	05/27/76	DC8		1		105	106
1-0019	06/12/76	B727		2		38	40
1-0021	08/02/76	B727		1		75	76
1-0017	08/08/76	B727		1		127	128
1-0027	11/17/76	DC9		1		76	77
				9		677	686
1-0006	02/10/77	YS11		1		26	27
1-0007	02/11/77	B727		1		51	52
1-0005	03/04/77	B727		1		70	71
1-0020	03/12/77	L1011		1		123	124
1-0024	06/09/77	B727		1		67	68
1-0015	07/16/77	DC6		1		6	7
1-0017	07/22/77	L188		2		100	102
1-0014	08/05/77	DC8		1		62	63
1-0016	08/07/77	DC8		10		117	127
1-0001	09/21/77	B727		1		103	104
				20		725	745
1-0002	03/28/78	DC8		1		128	129
1-0003	04/05/78	DC9		1		29	30
1-0012	04/19/78	B727		5		104	109
1-0005	05/30/78	B737		1		97	98
1-0004	08/08/78	DC10		1		256	257
1-0016	09/29/78	B707		1		71	72
1-0020	12/06/78	L1011		1		301	302
1-0018	12/21/78	B737		1		98	99
				12		1084	1096
1-0007	02/21/79	B737		2		73	75
1-0008	04/09/79	DC9		1		117	118
1-0030	04/21/79	B707		1		87	88
4-0021	09/15/79	B727		1		111	112
				5		388	393

SOURCE: National Transportation Safety Board (NTSB)

TABLE 4

BREAKDOWN OF OCCURRENCES OF IN-FLIGHT INJURY 1975 THROUGH 1989
(Page 2 of 3)

NTSB NUMBER	DATE	MODEL OF AIRCRAFT	FATALITIES	INJURIES SERIOUS	INJURIES MINOR	INJURIES NONE	TOTAL ON BOARD
3-0187	02/08/80	N262		1		16	17
1-0003	04/04/80	DC9		2		66	68
1-0019	04/21/80	B707		1		122	123
1-0004	07/15/80	DC9		2		54	56
1-0010	09/12/80	L1011		2		67	69
1-0012	10/17/80	B707		1		99	100
				9		424	433
1-0002	02/10/81	B737		1		43	44
1-0016	04/03/81	DC10		8		158	166
1-0022	05/18/81	DC9		1		73	74
4-0031	06/02/81	A300		1		168	169
1-0010	06/05/81	B727		1		108	109
1-0008	06/30/81	BAC111		1		69	70
1-0018	10/23/81	B727		1		111	112
				14		730	744
ATL82DA142	03/22/82	DC9		1		56	57
DEN82IA098	05/27/82	DC8			22	124	146
NYC82FA110	05/29/82	DC8		1	1	109	111
LAX82AA259	07/16/82	DC10		7	19	142	168
DCA82IA031	09/02/82	B727		1	1	128	130
FTW83LA033	11/02/82	B737		1		67	68
FTW83LA072	12/30/82	DC10			14	203	217
				11	57	829	897
SEA83LA039	01/07/83	B727		1		36	37
ATL83FA328	04/02/83	B707		1		190	191
LAX83LA262	06/04/83	DC10		1		240	241
NYC84IA007	10/12/83	DC10			13	78	91
DCA84AA008	11/24/83	L1011		5	20	136	161
LAX84LA115	12/22/83	DHC7		1	1	25	27
MIA84LA052	12/29/83	B737		1	7	38	46
				10	41	743	794
MIA84IA054A	01/01/84	DC10			1	495	496
FTW84FA153	03/04/84	B727		1	3	44	48
MIA84FA146	04/23/84	DC8		1	3	188	192
ATL84LA235	07/25/84	DC9		1		99	100
ATL85LA014	10/19/84	DC8		1	2	93	96
DEN85FA040	12/07/84	DC9		1	1	103	105
				5	10	1022	1037
CHI85FA174	04/23/85	B727		1	1	3	5
MIA85FA178	05/28/85	A300		2	19	53	74
MIA85LA194	06/16/85	B737		1	1	43	45
CHI85FA249A	06/23/85	B727		2	2	71	75
ATL85IA263	08/29/85	B727			7	118	125
ATL86LA016	11/03/85	B737		1	1	58	60
				7	31	346	384

SOURCE: NTSB

TABLE 4

BREAKDOWN OF OCCURRENCES OF IN-FLIGHT INJURY 1975 THROUGH 1989
(Page 3 of 3)

NTSB NUMBER	DATE	MODEL OF AIRCRAFT	FATALITIES	INJURIES SERIOUS	INJURIES MINOR	INJURIES NONE	TOTAL ON BOARD
CHI86FA096	03/03/86	B747		2	7	331	340
DEN86FA120	04/25/86	CV580		1		30	31
DEN86FA125	05/04/86	B737		2		50	52
MIA86FA208	07/13/86	A300		2	28	213	243
ALT86LA202	07/21/86	DC9		1	1	39	41
MIA86LA229	08/05/86	B727		1		102	103
LAX87MA044	11/07/86	DC10		1	3	119	123
ANC87FA021	12/15/86	B727		2	7	93	102
ATL87LA046	12/22/86	B737		1	4	131	136
				13	50	1108	1171
FTW87RA066	02/14/87	B707	1		3	131	135
FTW87LA082	03/16/87	B737		1		58	59
CHI87FA106	03/29/87	A300		1		246	247
ATL87LA102	04/01/87	B727		1		95	96
DCA87LA037	06/26/87	DC10			1	220	220
NYC87FA257	09/17/87	B727		1		70	71
NYC87FA260	09/18/87	B737		1	6	74	81
NYC87FA264	09/28/87	L1011		1	39	99	139
ATL88LA034	11/10/87	B737		1		65	66
MIA88FA032	11/11/87	A310		3	32	105	140
			1	10	81	1163	1254
CHI88FA048	01/19/88	B767		1	1	145	147
MIA88LA090	01/19/88	DC9		1	1	95	97
ATL88LA084	01/25/88	B767		1	3	151	155
NYC88LA074	01/27/88	DC9		1		81	82
CHI88IA081	03/24/88	B767			3	208	211
MIA88IA177	05/24/88	BAC111			6	55	61
BFO88LA061	06/26/88	B737		1		106	107
ATL88FA239	08/26/88	B767		1	9	55	65
ATL88IA241	08/32/88	B737			13	81	94
NYC88FA238	09/21/88	DHC7		1	2	12	15
NYC88LA072	11/03/88	B747		1		211	212
MIA89WA071	11/14/88	A300		1	4	222	227
LAX89LA068	12/23/88	B747		1	1	220	222
				10	43	1642	1695
LAX89IA184	05/07/89	B747			3	383	386
LAX89LA191	05/10/89	A300		1		93	94
CHI89IA104	06/06/89	DC10			24	224	248
ATL89FA161	06/16/89	L1011		7	23	259	289
MIA89LA228	08/19/89	F28		1		13	14
CHI89IA179	09/05/89	B767			6	156	162
				9	56	1128	1193

Source: NTSB

TABLE 5

OCCURRENCES OF CREWMEMBER INCAPACITATION
1975 THROUGH 1989

NTSB NUMBER	DATE	MODEL OF AIRCRAFT	TOTAL ON BOARD
4-0004	03/14/79	B747	339
4-0017	09/30/79	B747	317
4-0025	10/01/79	B727	64
4-0023	11/25/79	L1011	212
4-0008	07/14/80	BAC111	78
4-0027	09/11/81	B727	NOT RECORDED
1-0027	09/20/81	DC10	345
4-0021	10/17/81	DC10	128
DEN82IA049	03/25/82	G159	20
SEA83IA027	12/01/82	DC9	22
DEN85IA068	01/23/85	B737	107
CHI85IA149	03/24/85	B727	131
NYC85FA260	07/02/85	DC9	53
CHI86IA099	03/02/86	DC10	106
LAX86MA161	03/31/86	B767	192
ATL86IA162	06/08/86	B727	67
NYC86IA125	07/06/86	B737	125
NYC88IA112	03/22/88	B757	99
LAX88IA311	08/23/88	L1011	39
			2,444

Source: National Transportation Safety Board (NTSB)

Appendix B

Details of the Proposal

APPENDIX B

Details of the Proposal

This appendix discusses details of the proposed flight attendant rule on scheduled duty period limitations and rest requirements. The proposals are outlined in the table below.

PROPOSED SCHEDULING LIMITATIONS

Maximum Scheduled Duty Period	Minimum Rest Period	Minimum Reduced Rest Period	Minimum Compensatory Rest Period	Minimum Flight Attendant Crew Complement
14 hours	9 hours	8 hours	10 hours	FAA minimum
16 hours	12 hours	10 hours	14 hours	FAA minimum plus 1
18 hours	12 hours	10 hours	14 hours	FAA minimum plus 2
20 hours	12 hours	10 hours	14 hours	FAA minimum plus 3

Scheduled Duty Period Limitations

Under proposed §§ 121.466(b) and 135.273(b), a flight attendant's scheduled duty period normally would be limited to a maximum of 14 hours.

Proposed §§ 121.466(e) and 135.273(e) would permit certificate holders to assign flight attendants to scheduled duty periods of more than 14 hours, but no more than 16 hours under specified

conditions. However, the certificate holder would be required to assign to the flight or flights in that duty period at least one flight attendant in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder's operations specifications. Proposed §§ 121.466(f) and 135.273(f) would permit certificate holders to assign flight attendants to scheduled duty periods of more than 16 hours, but no more than 18 hours. However, the certificate holder would be required to assign to the flight or flights in that duty period at least two flight attendants in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder's operations specifications. Proposed §§ 121.466(g) and 135.273(g) would permit certificate holders to assign flight attendants to a scheduled duty period of more than 18 hours, but no more than 20 hours. However, the certificate holder would be required to assign to the flight or flights in that duty period at least three flight attendants in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder's operations specifications.

Rest Requirements

Proposed §§ 121.466(c) and 135.273(c) would require flight attendants assigned a scheduled duty period of 14 hours or less to have a scheduled rest period of at least 9 consecutive hours. Proposed §§ 121.466(d) and 135.273(d) would permit this rest

period to be reduced to 8 consecutive hours if the flight attendant were provided a subsequent rest period of at least 10 consecutive hours. The subsequent rest period would be required to be scheduled to begin no later that 24 hours after the beginning of the reduced rest period. Proposed §§ 121.466(h) and 135.273(h) would require flight attendants assigned a scheduled duty period of more than 14 hours to have a scheduled rest period of at least 12 consecutive hours. Proposed §§ 121.466(i) and 135.273(i) would permit this rest period to be reduced to 10 consecutive hours if the flight attendant were provided a subsequent rest of at least 14 hours. The subsequent rest would be required to be scheduled to begin no later than 24 hours after the beginning of the reduced rest period.

In addition, proposed §§ 121.466(n) and 135.273(n) would require at least 24 consecutive hours of rest during any 7 consecutive calendar days during which a flight attendant is engaged in air transportation.

The final rest provision, proposed §§ 125.37(a), would add Part 125 flight attendants to the existing flight crewmember requirement of 8 consecutive hours of rest during any 24-hour period.

Recordkeeping Requirements

Proposed §§ 121.683 and 135.63 contain recordkeeping requirements to ensure that the proposed duty period limitations and rest requirements are met.

Appendix C

DC-10 Evacuation

APPENDIX C

DC-10 Evacuation

The accident in which the DC-10 overran the departure end of the runway at Los Angeles International Airport on March 1, 1978, illustrates both the flight attendants' role and the obstacles that may be encountered in evacuating an airplane. In that incident, flight attendants recognized that the deceleration rate of the airplane after aborting the takeoff was insufficient to stop on the runway, so they quickly began instructing the passengers to assume the crash position.

The left main gear collapsed, causing the left wing fuel tank to rupture and a fire to break out on the left side of the airplane. Flight attendants were unable to open one exit door, and when the captain managed to open the door, the emergency exit slide remained in its container. A flight attendant ultimately blocked the exit and redirected passengers to another. However, when that alternate exit was opened, the slide pack rolled inside the cabin because of the angle of the fuselage — the rear of the plane was only inches above the ground. Flight attendants managed to deploy the slide and 40 passengers used it before it failed because of heat. Two other exits were discovered to be unusable because of fire, so flight attendants blocked them and redirected passengers. Another slide was deployed, but soon burned. Slides deployed on the right side of the plane were at steep angles, because the airplane had rolled to the left. Passengers and flight attendants battled strong winds to deploy

Statement of Walter S. Coleman
Vice-President Operations
Air Transport Association of America
Before the Aviation Subcommittee
Public Works and Transportation Committee
U.S. House of Representatives
March 13, 1991

I am Walter S. Coleman, Vice-President Operations for the Air Transport Association of America (ATA). On behalf of our passenger-carrying member airlines, I would like to thank you for the opportunity to appear here today to express our views on H.R. 14, Limitations on Flight Attendant Duty Times.

All ATA member airlines are either major or national carriers. The nine major U.S. airlines, all ATA members, employ approximately 72,000 of the approximately 83,000 flight attendants among the U.S. carriers.

Nearly two years ago, the Air Transport Association appeared before this Committee to comment on legislation that was virtually identical to H.R. 14. Two important points were conveyed by ATA and the accompanying panel comprised of airline flight attendants. First, ATA and its member airlines recognized the vital and important safety role which our flight attendants perform each day on every flight. Second, ATA questioned the need to establish Federal regulations governing duty time limits and rest requirements for flight attendants. Our views remain unchanged.

Safe operations are the number one priority of the airlines. Most significantly, in more than 50 years of commercial airline operations, there is not one example of flight attendant fatigue which contributed to passenger injury or loss of life. On the contrary, the performance of flight attendants in very trying circumstances related

to airplane accidents, hijackings or other demanding and challenging situations has met and, in some cases, exceeded expectations.

Understanding and recognizing the safety responsibilities and record of our flight attendants, one key question needs to be addressed in this hearing today: Do the duty time and rest requirements, as presently applied by the carriers' various labor contracts and work rules, provide for a work environment that permits the flight attendants to perform their safety tasks? The ATA believes the answer to that question is yes. More importantly, we believe that the study of flight attendant duty records completed by the Federal Aviation Administration (FAA) in September 1989 at the request of this Subcommittee reaffirms the industry's position.

In our previous testimony, ATA and the flight attendant panel expressed the view that there was an absence of evidence supporting the need for flight attendant duty time limits and rest requirements. At that time, we quoted from FAA's response in denying the petitions submitted by two flight attendant groups that there was "no empirical evidence that shows any correlation between flight attendant duty time, flight attendant safety duties and risk to passengers." The denial, as you may recall, further stated "there is no showing that the unrelated instances cited in a few comments of lengthy flight attendant duty time either were the result of work rules mandated by the company or were systemic throughout the industry. Nor was there a showing that these instances had an adverse impact on safety."

During the 1989 hearing, the FAA announced that it would undertake a study to examine the empirical evidence related to flight attendant duty time and rest

requirements. The FAA is to be commended for its swift and thorough completion of the study (entitled *Study of Current Industry Practice Flight Attendant Flight Duty and Rest Times*). Both ATA member airlines and flight attendant unions provided considerable data and support for this work.

While the study intentionally did not draw any conclusions and made no policy recommendations, the data was very clear: 12,500 records were examined to determine maximum duty days and minimum rest periods. Among the five major and four national airlines reviewed, of these 12,500 records, only 6 exceeded 18 hours, and another 39 cases exceeded 16 hours duty time. The study's outcome provides significant evidence that a federal regulation for duty time and rest requirements cannot be justified.

The study takes on greater significance when you consider that it does not represent a random sampling of flight records. In fact, the study states "...the instances of below minimum rest or extended duty periods contained here are the result of a concentrated effort to identify appropriate records and search for 'worst cases'. Thus, more examples probably were discovered in this study than would have been found if the same amount of effort had been invested in pure random sampling, given the same constraints in terms of records availability, time and resources."

Mr. Chairman, the airlines do not believe that this legislation is necessary for two fundamental reasons. One is the existence of contracts or work rule arrangements between the airlines and their flight attendants which establish, at the very least, duty time limits and rest requirements. Some contracts or work rule

arrangements go well beyond these two items and include other elements of interest to flight attendants such as on-board rest arrangements and flight time limits. (According to the FAA's study, 78% of U.S. flight attendants work under union contracts.) The second reason the industry opposes this legislation is the absence of data to support the position that regulations will improve airline safety. This is an area best left to traditional labor/management negotiation.

Though the study did not address the issue of cost, I would like to take a moment to do so. As you know, the airline industry experienced unprecedented financial losses in 1990; in fact, these losses may exceed $2 billion. Travel concerns as the result of hostilities in the Persian Gulf will likely leave us with additional losses in the first quarter of 1991. Though no formal cost analysis of H.R. 14 has been completed by the airlines, one carrier has estimated that the implementation of these unnecessary regulations will increase their operating costs by nearly 50 million dollars annually. Additional flight attendants and the loss of revenue seats necessary to comply with the on board crew rest requirements are the main reasons for the increased cost. Mr. Chairman, the airlines cannot absorb these costs. The result of this legislation will be increased ticket prices to customers. While the industry has a long history of supporting and paying for vital safety initiatives -- including aging aircraft modifications, the introduction of "high-g" dynamic load passenger seats, security improvements, traffic alert and collision avoidance systems, windshear detection, replacement of cabin materials with less flammable materials, cabin modifications for the handicapped, and drug testing -- the FAA's 1989 study does not suggest that flight attendant duty time limits is a

safety initiative in need of federal regulation.

ATA member airlines well recognize the role of flight attendants in the safe and efficient provision of air transportation. However, we firmly believe that the contracts and work rules that have been agreed upon between the airlines and their flight attendants are effective in providing a safe work environment. The only basis for establishing flight attendant duty time limitations and rest requirements would be to address a significant and well-documented safety concern. Our member airlines do not believe that the FAA study defines a safety issue that requires regulation.

Mr. Chairman, thank you for the opportunity to appear before this Committee today. I have concluded my formal testimony and I am prepared to answer any questions you or your colleagues may have on this issue.

TESTIMONY

OF

CHERYLE LEON, PRESIDENT

ASSOCIATION OF PROFESSIONAL FLIGHT ATTENDANTS

ON BEHALF OF THE COALITION OF FLIGHT ATTENDANT UNIONS

BEFORE THE

AVIATION SUBCOMMITTEE

HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

ON

FLIGHT ATTENDANT DUTY TIME AND REST REQUIREMENTS

MARCH 13, 1991

Chairman Oberstar, Members of the Subcommittee:

Thank you for this opportunity to testify at this important hearing on flight attendant duty time limitations and minimum rest requirements. My name is Cheryle Leon and I am the President of the Association of Professional Flight Attendants. I am here today on behalf of the Coalition of Flight Attendant Unions, an alliance representing over 70,000 flight attendants working to promote passenger safety and flight attendant occupational health through safe, healthy, and reasonable hours of work and rest for flight attendants.

As you are aware, there are still no regulations governing the hours of work or rest for flight attendants. In the interest of providing flight attendants with safer and healthier jobs, increasing safety for the traveling public, and fostering equal protection under the law for this segment of American workers, we urge you to support H.R. 14.

The Federal Aviation Act of 1958 (Section 601 (a)(4)) authorizes the Federal Aviation Administration (FAA), and indeed requires the FAA in the interest of safety, to write rules and regulations governing the maximum hours for periods of service for "airmen" and other employees of air carriers. Further, the FAA has

claimed jurisdiction over, and responsibility for, the occupational safety and health of all crew members. Despite its mandate and jurisdictional claims, the FAA has failed to set duty time limits or rest period requirements for flight attendants. Those FAA duty and rest limits which do exist apply only to the predominantly male employee groups of air carriers, i.e. pilots, flight engineers, and dispatchers. Historically, such disparate rulemaking has discriminated against flight attendants, a predominantly female work force. It is interesting to note the Department of Transportation's (DOT) lengthy history of mandating duty and rest limits for rail employees.

Flight attendants are also not covered by section 7 of the Fair Labor Standards Act or the active protections of the Occupational Safety and Health Administration. Thus, there are no protections for this group of employees or legal penalties for a carrier that schedules flight attendants for an excessive number of hours.

The direct result of this lack of protections and disparity in the treatment of flight attendants is abusive scheduling that threatens the health of flight attendants and the safety of the millions of Americans who fly each year.

Before we discuss the important safety duties of flight attendants and examine the effect that flight attendant

fatigue has on those duties, we would like to give a brief history of our lengthy struggle to secure reasonable duty time and rest rules for flight attendants. In April 1978 and then again in January 1980, the Federal Aviation Administration wrote letters which promised that such limitations would be issued by the "end of the year." (These letters are attached to this testimony.) Testimony presented before this Subcommittee in August 1980 by the flight attendant unions refers to the FAA considering flight attendant duty time limitations back in the early 1960's.

In 1984 and 1885, when no rule had been issued, the unions petitioned the FAA to make rules. While waiting for a decision on the petitions and to assist the FAA in its decision making process, flight attendant leaders representing over 25 carriers, ranging from major carriers to regional carriers, worked closely to study industry practice and working conditions of flight attendants. All available literature, contracts, existing international standards, and relevant economic considerations were reviewed and a detailed analysis resulted. From this analysis, the duty time and rest parameters now found in H.R. 14 developed. Unbelievably, in January 1989, the FAA denied the petitions and during the same month, Congressman Norman Mineta and Senator Daniel Inouye introduced legislation that directed the FAA to write rules or the rules contained in the legislation would take effect.

In May of that year, this Subcommittee held hearings concerning duty time limitations. During that hearing, the FAA agreed to collect data to determine whether there was indeed a problem with flight attendant fatigue and long duty days. It is important to point out the absurdity that the same agency, the FAA, that said in its January 1989 petition that there was no evidence of flight attendant fatigue and therefore no need for duty or rest time regulations, only five months later admitted before this Subcommittee that a problem could exist and started its research. The FAA spent the summer of 1989 collecting information voluntarily provided to the agency by selected U.S. carriers. Each carrier chose the type of information to provide to the FAA. We believe this research technique underestimated the total number of fatigue incidents suffered by flight attendants but nonetheless demonstrated the existence of serious problems.

Despite the fact that the airlines were able to choose the data submitted to the FAA, when the report was released at the end of the summer, it found widespread flight attendant duty and rest problems. The report looked in detail at schedules at only five major carriers, but found at least 74 cases of domestic duty hours in excess of a 14 hour limit. The data on the regional carriers showed 140 cases in excess of the same domestic limit. In total, the report found over 200 cases in excess of the 14 hour limit at only 12 major and regional carriers. This collection even revealed instances of flight attendants on

duty in excess of 20 hours. These exceptionally long days occurred more often at non-union, charter carriers. Yet, as I just stated, there were many instances of lengthy duty days at the major and regional carriers as well.

In our view, 200 cases of fatigued flight attendants, potentially affecting the safety of thousands of their passengers, is a serious safety problem, and the theory that excessive duty hours are a rare or infrequent occurrence has been discredited. This is particularly true since the report only covers voluntarily supplied information from a small sample of carriers.

The report also showed that some two dozen countries, including those with advanced regulatory schemes and those with regulatory schemes generally considered less advanced than ours, have already acknowledged that flight attendant duty time and rest are important safety issues by promulgating rules to govern them. Unlike the United States, these countries do not maintain a double standard whereby dispatchers, controllers and pilots have rest rules and the flight attendants do not.

In the Coalition of Flight Attendants' review of the foreign countries studied by the FAA, we found 17 foreign countries have flight attendant certification, licensing or duty time regulations. While some of the countries allowed as few as 12 hours on duty, the

most common was 14 hours maximum duty for domestic AND international flying. Clearly, the U.S., which takes great pride in being the leader in worldwide civil aviation, falls far behind many foreign countries in addressing the importance of the flight attendant's role as a safety professional.

The FAA's report also identified serious problems in the area of rest. The agency, arbitrarily using eight hours of rest as a guideline, found over 100 cases at 11 carriers where rest periods were less than eight hours. (An eight hour rest period usually provides a maximum of four to five hours a sleep. The Coalition of Flight Attendant Unions strongly believes four to five hours of sleep is unacceptable.) Thus, the FAA's own study established that there is a serious industry-wide problem of inadequate rest at the carriers. Short rest periods are particularly fatiguing when sandwiched between long duty periods. Our review of the regulations showed many of the countries require the ten hours of minimum rest to be at the hotel. This is in contrast to H.R. 14's definition that the ten hours rest is time away from work which includes leaving the aircraft, transportation to and from the hotel and hotel check-in.

H.R. 14 requires a minimum rest requirement of 10 hours on domestic and 12 hours on international flights. It is interesting to note that the report also found several foreign countries far ahead of the U.S. in rest standards as

well. Some of these countries impose specific restrictions on what a rest period or day off must include.

In addition to the foreign countries responding to the FAA, key public health officials and researchers, commissioned by the Japan Federation of Cabin Attendants, issued a Preliminary Study in November 1989 on flight attendant duty time. It found the union's recommendation of 13 hours maximum duty and 12 hours of rest to be "reasonable or, in some cases, a little reserved." The study went on to say, "...we can easily estimate that there are ...serious problems concerning fatigue among these air cabin attendants." While Japan is well known for its keen sensitivity to employee productivity, it does not find that incompatible with reasonable employee protections.

In the final analysis, of the FAA's report, the debate over duty time should not be over whether there are several hundred, several thousand, or tens of thousands of abuses each year. The debate should center on whether the agency will finally rectify its disparate treatment, after two decades of delay, and admit that flight attendants are important safety professionals who deserve the same kind of duty limits that the FAA now provides pilots, controllers and dispatchers. This approach would be far more consistent with the FAA's mandate to prevent aviation safety and health problems before they occur than the current illogical one.

The FAA has repeatedly failed over the last 13 years to issue proposed rulemaking for flight attendants. We think it is important to share with the Subcommittee that we are not alone in the fight for improved duty time limitations. In June 1990, the Airline Pilots Association petitioned the FAA to amend the Federal Air Regulations to reflect a maximum 14 hours on duty for pilots with a minimum of 10 hours rest. The National Aeronautic and Space Administration (NASA) and other studies cited in ALPA's petition find that length of duty time is a better method for judging fatigue than actual flight time which is the basis of the pilots' current FAR's. According to this petition, Dr. John K. Lauber, Member, National Transportation Safety Board, in remarks before the Second Annual Meeting of the Association of Professional Sleep Societies stated that, "There are some serious shortcomings in the substance and enforcement of regulations governing crewmember duty and rest." H.R. 14 corrects these shortcomings.

We would now like to turn to a discussion on the impact of long duty days on the working flight attendant. Flight attendants are safety professionals who are absolutely crucial to minimizing loss of life in the event of an emergency. We must determine that an evacuation is necessary. We must determine which exits to use after assessing dangerous external conditions. We must open the exits and deploy the slides, which are often damaged

or malfunctioning. We must direct and redirect the passengers safely out the exits. All this must be done in under 90 seconds or we risk the terrible loss of lives when the plane is engulfed in flames. These are serious responsibilities which require appropriate alertness, rapid response, good judgment, and concentration, which are impossible when fatigued.

Flight attendants who have worked 16 or more hours, with multiple take-offs and landings, little rest, and jet lag cannot optimally handle emergencies. A 1979 article entitled "Chronic Fatigue" in Aerospace Safety cited the following problems with chronic fatigue as it relates to pilots: increased error potential; decreased reaction time; deterioration in timing; increased willingness to accept lower standards; attention to individual task components to the exclusion of others; a tendency to neglect relevant cues; mistakes on simple, well-learned tasks; reduced attention span; and overlooking of important elements in a task series.

Of course, the effect of fatigue on safety has long been acknowledged by the FAA through the regulation of hours of work and rest of pilots, dispatchers, and air traffic controllers. Each of these groups has important safety duties that would be compromised by lack of alertness, poor concentration, increased errors, and the other usual results of excessive fatigue. Our duties in an emergency evacuation are equally essential to safety, and it is

obvious that they are equally compromised by fatigue.

Flight attendants do much more than evacuate aircraft after accidents. We deal with disturbed and assaultive passengers, and with hijackers and terrorists. We are the fire department at 30,000 feet who must be able to detect and fight in-flight fires. Detecting smoke, or the unusual behavior of passengers, is precisely the kind of task that is adversely affected by fatigue. We are the in-flight emergency medical technicians effectively handling in-flight medical emergencies, ranging from heart attacks to turbulence-related injuries. We must assist passengers in life-threatening aircraft decompressions. We are the on-site bomb detection squad. We must evacuate an aircraft when there is a fire hazard or bomb threat. These types of emergencies are not rare events; they occur each day.

The FAA underscored the importance of flight attendants to aviation safety when it began to subject us to drug testing. One group of drugs that we are required to be tested for is opiates. Webster's dictionary defines opiate as "containing opium, inducing sleep, narcotic." Can anyone miss the irony of requiring flight attendants to be randomly tested for sleep-inducing drugs such as opiates, while at the same time allowing them to work for 24 hours in a row? There is considerably more evidence that we are fatigued on the job than that we are drugged on the job.

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How fatigued are flight attendants? It is not uncommon for flight attendants to work a 12 hour day with an ensuing rest period of nine hours. This "rest" period includes doing paperwork, waiting for passengers to leave the aircraft, traveling to the hotel, checking in, eating, sleeping and returning to the airport. This sequence might be followed by another 12 hour work day. The fatiguing effects of these long work days (which can also include working through the night, time-zone transitions, and rotating shifts) are compounded by environmental factors such as poor cabin air quality, noise, and vibration, as well as a demanding physical work load. For example, flight attendants must walk several miles and push 250 pound meal and beverage carts on inclined floors.

These 12 hour days are often extended to 16 hours or more due to air traffic control delays, weather, mechanical problems, and other circumstances. Fatigue compromises a flight attendant's ability to function by placing the traveling public and the crew member at risk.

We wish to point out that flight attendants who refuse to fly because of fatigue, can and have been disciplined, or even terminated. As flight attendants, we should never have to choose between safe operations and our jobs. Nor should we be forced to compromise our own personal health. Fortunately, it is not necessary to completely overhaul the way the industry schedules its flights to protect safety and health. H.R. 14 sets parameters that

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are feasible. We want to thank Congressman Mineta for his tremendous support on this issue, and on other cabin safety issues.

The bill before you today is similar to the legislation considered by this Subcommittee during the 101st Congress. It requires the DOT to initiate a rulemaking proceeding to establish limitations on duty time for flight attendants, including minimum rest requirements. H.R. 14 requires a maximum of 14 hours of actual duty time and a minimum of at least 10 consecutive hours of rest after each duty period on domestic flights and a maximum of 16 hours of actual duty time and minimum of at least 12 hours of rest after each duty period on an international flight. The bill also contains other work/rest parameters.

The only major change in H.R. 14 from last session's bill is one which mandates that DOT issuance of final rules not later than 240 days after the date of enactment and also mandates that the final regulations must establish the duty time limitations and rest requirements outlined within the bill. The FAA and DOT have promised year after year to provide the necessary protections for this workforce but has failed to do so. Now is the time for action. We support Congressman Mineta's decision to require the Department to issue those specific requirements found in his bill.

It has been said by the airlines that the issue of flight

attendant working hours should not be regulated by the FAA because it is a matter of collective bargaining. But, if working hours should be left to collective bargaining, why does the FAA regulate pilot, dispatcher, and air traffic controller duty hours? It is because aviation safety matters are too important to be left up to the collective bargaining process. Moreover, the maximum duty hours in the Mineta bill encompass the maximum hours allowed under many collective bargaining contracts. It is the flight attendants at smaller, non-union carriers or union carriers without contracts that would benefit the most from duty time rules. For example, the National Transportation Safety Board found that the flight attendants who died in the Galaxy Airlines crash on January 21, 1985 would have been on duty 25 hours if the plane had not crashed.

Finally, we would like to caution the Subcommittee about statements you may hear to the effect that flight attendants spend a reasonable number of hours in flight each month. Actual flight time is only a small fraction of the amount of time a flight attendant works due to requirements to report to work well in advance of the flight, time spent on aircraft at intermediate stops, time spent between connecting flights and on overnights, and time required to perform paperwork and other duties after a flight. Flight attendants' actual work hours can be twice the number of hours flown, and hours away from home can be four times the hours flown.

Mr. Chairman, Members of the Subcommittee, I would like to again point out the irony of allowing flight attendants to be on duty for 25 hours in a row, as in the Galaxy case, while at the same time requiring them to be randomly drug tested to find out if they are taking sedatives that might make them drowsy. This is not good government, and it is not sound safety policy. We urge the Subcommittee to act swiftly on H.R. 14.

Thank you again for this opportunity to testify and I would be happy to answer any questions you may have.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20591

April 21, 1978

Mr. Richard Wagner
Secretary-Treasurer, Independent Federation
of Flight Attendants
630 Third Avenue
New York, N. Y. 10017

Dear Mr. Wagner:

Thank you for your letter of March 27 asking when you may expect a Notice of Proposed Rule Making (NPRM) concerning flight and duty time rules for flight attendants.

The Federal Aviation Administration plans to issue an NPRM on flight attendant flight and duty time limitations and rest requirements by the end of this year.

Thank you for your interest in this matter.

Sincerely,

for J. M. VINES
Acting Director
Flight Standards Service

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DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20591

JAN 22 1980

Mr. Richard P. Wagner
Secretary/Treasurer
Independent Federation of Flight Attendants
630 Third Avenue
New York, N. Y. 10017

Dear Mr. Wagner:

This is in response to your letter of January 8, 1980, in which you requested information on the issuance date for the notice of proposed rule making on flight attendant flight and duty time. This rule-making action is embodied in Operations Review Notice No. 14 which presently is scheduled for issuance in late August 1980.

Sincerely,

William J. Sullivan

WILLIAM J. SULLIVAN
Acting Chief, Safety Regulations Staff

JAN 23 1980
IFF

RAA Regional Airline Association • 1101 Connecticut Avenue, NW • Suite 700 • Washington, DC 20036 • 202/857-1170 • ARINC "WASRAXD"

SUBCOMMITTEE ON AVIATION

PUBLIC WORKS AND TRANSPORTATION COMMITTEE

U.S. HOUSE OF REPRESENTATIVES

H.R. 14, LIMITATIONS ON FLIGHT ATTENDANT DUTY TIMES

Statement of : Deborah C. McElroy
Vice President
Regional Airline Association

March 13, 1991

Mr. Chairman, members of the Subcommittee:

I am Deborah McElroy, Vice President of the Regional Airline Association. RAA, on behalf of its 78 member air carriers, appreciates this opportunity to present the views of the regional airline industry on HR 14, a bill to establish limitations on duty time for flight attendants.

Regional airlines provide safe, efficient air transportation, connecting the nation's smaller cities to the major hub airports. The industry carried over 40 million people last year, with RAA members providing service to more than 90 percent of those passengers. Regional carriers operate approximately 1900 aircraft, the majority of which are propeller powered airplanes with 19 to 75 seats. Some carriers, however, also fly small jets in the 100 passenger range.

Flight attendants, as you know, are only required on aircraft with 20 or more seats. Consequently, flight attendants are employed on less than one-third of the aircraft operated by regional airlines. According to RAA figures, there are approximately 3,500 flight attendants employed in the regional airline industry. These men and women, like their counterparts in the major airlines, are dedicated safety professionals. The regional airline industry recognizes and appreciates the critical role flight attendants play in the safe transportation of our passengers.

I was privileged to present our views to this Subcommittee nearly 2 years ago on legislation that was very similar to HR 14. Our position has not changed. Regional airlines continue to oppose legislation to impose duty time restrictions for flight attendants because we do not believe that there is a legitimate safety reason to interfere with the contractual relationship between flight attendants and regional air carriers. It is important to note that there is not a single recorded incident where flight attendant fatigue contributed to passenger injury or loss of life. Further, we are aware of no potential for flight attendant fatigue to contribute to passenger injury or loss of life on a regional airline flight.

FAA's recent report, Study of Current Industry Practice Flight Attendant Flight Duty and Rest Times, while not drawing specific conclusions, does provide sufficient data indicating that federal regulations in this are are not justified. An equivalent of 1,300 months of flight attendant records for 7 regional airlines were analyzed, with only 5 cases found where duty time exceeded 18 hours and 23 where duty time exceeded 16 hours. The study's authors conceed that "more examples were discovered than would have been found if the same amount of effort had been invested in pure random sampling". Therefore, the examples of below minimum rest or extended duty periods cited in the study are the result of a targeted effort to identify the most extreme cases of extended duty times for flight attendants. Such exceptions clearly do not

warrant the imposition of onerous federal regulations.

Passage of this proposed legislation will not materially change the work rules of regional airline flight attendants, but it would create very problematic record-keeping requirements. The committee should be aware that HR 14, as currently written, would impose different and potentially more restrictive limitations on flight attendants than those currently in place for pilots. FAA regulations governing pilots are geared to rest periods, rather than duty time. This is a much more practical system and one with which the carriers are very familiar. In fact, a large number of regional carriers actually schedule their flight attendants with their pilots, using the same rest requirements. The promulgation of rules as outlined in this legislation could wreak havoc on the scheduling operations of the carriers and impose significant costs at a time when the industry can ill afford to absorb such expenses.

Regional carriers are already faced with the enormous costs of installation of a wide variety of sophisticated avionics equipment, as well as the expenses involved with enhanced security regulations, increased random drug testing rates, carriage of disabled passengers and aircraft modifications related to cargo bins and aging aircraft. These regulatory requirements alone will cost the industry millions of dollars in 1991. Adding duty time restrictions for flight attendants to the list of increased federal regulations with which the regional airline industry must comply

will only add to those costs, with no concurrent benefit to the airlines, the flight attendants, or the traveling public.

Thank you for the opportunity to appear before the committee and your consideration of our comments. I am prepared to answer any questions that the Subcommittee may have on our testimony.

BEFORE THE SUBCOMMITTEE ON AVIATION

HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

FLIGHT ATTENDANT FATIGUE AND SAFETY

TESTIMONY OF

ERIN MCKEE, FLIGHT ATTENDANT FOR A NATIONAL CARRIER

MARCH 13, 1991

Good morning Mr. Chairman and Members of the Subcommittee.

My name is Erin McKee. I have been a flight attendant for seven years and currently work for a national carrier. I am a member of the Association of Flight Attendants, AFL-CIO, and serve on AFA's Negotiating Committee for my carrier. We are presently negotiating for our first contract. I enjoy my work as a flight attendant and have chosen it as my career. Lately though, as I fly excessively long trips with little rest, I question this decision and wonder if I chose a healthy profession. I am here today to testify about the serious need to limit flight attendant duty time and guarantee rest time.

In preparation for testifying before you, I spoke to a number of my colleagues and asked them to describe trips they had flown recently. I was appalled at what I heard. Flight attendants at my carrier are flying horribly long trips and getting little to no rest in between. We are exhausted and in desperate need for federal regulations concerning flight attendant duty time and rest.

Let me take some time to describe a few of these trips. I would like to point out that these trips are not freak exceptions. We are flying these trips routinely. It is not uncommon for us to fly 20

or even 30 hour duty periods with little to no rest. In fact, I had a hard time deciding which trips to use for this testimony. There were just too many long ones to choose from.

Let me begin by describing the many tasks that fill flight attendants' work days. From the moment we board a flight, we put away our baggage, perform our pre-flight check of the emergency equipment, inspect the cabin for anything suspicious like an unattended bag that could possibly contain explosives, check the cabin for cleanliness, broken seats and seat-back trays, inspect the catering supplies, and stock the beverage cart. When the almost 500 passengers begin to board, we welcome the passengers, assist them in locating their seats, give special attention to unaccompanied minors and other passengers needing special help, reconcile double seat assignments, help passengers properly store their carry-on baggage, answer their questions and provide pre-departure service to first class passengers. At departure, we make certain the passengers count is accurate, check that the door is properly closed, make sure all passengers are in their seats, perform our safety demonstration, do a final run through of the cabin to check seatbelts and carry-on baggage, secure the overhead storage bins, and sit down in our jump seats. During the flight, we talk to passengers and answer their questions, prepare and serve beverages and food, help scared or sick passengers and constantly check the aircraft environment so we are ready for any emergency. Finally, we prepare the galley and passengers for landing and once

the plane is at the gate, help passengers gather their belongs in deplaning. There is no time to rest or relax. We must be alert and attentive to each of the 480 passengers we serve. Even when we are on the ground in the plane holding passengers, many of these tasks must be completed.

When we do get a layover in a hotel, it is rarely adequate. The time we have to rest is reduced by the time it takes to "check-out" of the trip and leave the airport, travel to and from the hotel, which can take anywhere from minutes to hours, check into the hotel, eat, shower, rest or sleep and then get ready to return to the airport for the next day's work. Usually, we have less than seven or eight hours to sleep. In addition, we are usually staying at hotels near the airports, so our sleep is interrupted by the sound of planes landing or taking off. And, to make matters worse, at my carrier, we only get single rooms if the hotel room rate is less than $60. If it is over $60, or if the company has not reserved enough rooms, we must share a room with our colleagues. Rarely do we get a chance to really relax, unwind, and sleep.

Now, with the work of the flight attendant and the so-called "rest" of the flight attendant in mind, let me describe a few trips. Some of the trips we fly look fine on paper. Trips get longer when we are faced with weather delays, added stops, staffing shortages, and mechanical problems. A recent trip a colleague flew was scheduled to go from Columbus, Georgia to Bangor, Maine and onto Brussels,

Belgium. Instead, it went from Columbus to Columbia, South Carolina to Bangor and ended in Gander, Newfoundland. It took 21 hours despite the fact that the actual flight time between these points was only four and a half hours. First, the crew learned in Columbus that there would be an additional stop in South Carolina. The flight was delayed on the ground in South Carolina with passengers onboard for four hours. During this time, the flight attendants were required to remain with these delayed passengers to answer questions, serve refreshments and continue our safety duties. While in South Carolina, a maintenance worker, unfamiliar with the 747, put too much fuel in the plane and the next fuel stop was changed from Bangor to Gander. During takeoff in Columbia, a large bird was ingested in the engine. The crew was informed in Gander by the flight engineer that the flight could not continue to Brussels. The company began to make hotel and transportation arrangements for the passengers, flight attendants and pilots. Because of a storm in Gander, the regular vehicle was not available to transport the passengers to customs and the flight attendants were forced to deplane 400 passengers using a bus that seated only 40 people! It took 10 hours to get the passengers off the plane. Needless to say, the flight attendants were on board during this entire process and until the last passenger was transported to the terminal.

Last week, another colleague left her home in New York for the beginning of a nine day work week which would include military

personnel. The first several work days were relatively smooth. They included nine, ten and 12 hour duty days with short rest periods in between. On the sixth work day, the trip turned into a nightmare. After five days of flying, the longest and most difficult part was still ahead of the crew. She worked from San Bernadino, California to Savannah, Georgia with military troops. Due to poor company planning, she then had to "deadhead" from Savannah to Brussels. In Brussels, she flew an empty plane to Bahrain, Saudi Arabia. Although the plane did not carry any passengers, she was responsible for cockpit duty and cabin checks. The crew picked up troops in Bahrain and flew back to Brussels. They were then scheduled to get a rest period. She and the rest of the flight attendants were tired. They had no sleep or showers. She told me she was especially embarrassed to fly the troops in her exhausted state and apologized in advance to the troop commander for not being able to provide the best service. She should not have been flying that trip. They had been on duty too long. The trip ended after a 53 hour layover in Brussels and then back to New York. I am certain that some of you are thinking that 53 hours in Brussels does not sound all that bad. Let me assure you, after a nightmare trip such as this one, all you would be capable of doing for much of those 53 hours is sleeping.

This sixth day of the trip was actually scheduled by the company for over 38 hours on duty. The long duty day was not due to air traffic control holds, mechanical problems or bad weather, it was

scheduled for 38 hours and could have gotten longer. I know that when I work excessively long trips like this one, I feel like a zombie. When you are in your jumpseat, you are so exhausted that you begin to nod off, right in front of the passengers who depend on you for their safety. It is embarrassing, scary, and frustrating.

A third colleague of mine recently worked a trip that could go into the Guiness Book of World Records. Again, I would like to stress that these excessively long trips are not rare. While I outline the trip, please try to put yourself in his shoes and imagine just how tired you would be after working a trip like this. He left his home in New York on September 14th and flew on a commercial carrier to Los Angeles, California (six hours flight time). He was then transported by ground to San Bernadino, California (two hours in a van). He was in a hotel for approximately three hours when he received a call from the company that the troops he was supposed to meet in San Bernadino were actually in Kentucky. He then boarded another van and returned to Los Angeles (two hours). After waiting in the airport for four hours, he flew a commercial flight to Dallas, Texas and then on to Nashville, Tennessee (five hours total flight time). He was then driven to Hopkinsville, Kentucky (one hour in a van) and after 20 hours of travel with only three hours rest in San Bernadino, had another three hour "rest" in a hotel. He had been on duty for 26 hours before he worked his first passenger flight.

He then flew from Hopkinsville to Bangor, Maine (two and a half hours flight time) to Rome, Italy (seven hours flight time). In Rome, the crew had almost a 21 hour layover, which actually gave them about 16 hours in a hotel. The crew shared hotel rooms and took turns in the shower. From Rome, they worked to Istanbul, Turkey (almost two hours flight time) to Amman, Jordan (over two hours of flight time). In between these flights were many additional hours of duty time, hundreds of passengers and little sleep. In Jordan, he had a two day layover. Before returning to New York, he worked two more duty days -- both scheduled for over 18 hours. This is an exhausting trip. No one should be expected to work for this long without adequate sleep and, again, this trip did not run into any unforseen (unscheduled) delays. It was scheduled by the company to be this long. I would like to point out to the Members of the Subcommittee, that this flight attendant was only paid for 32 hours because the company would not count the ground transportation time that they scheduled for him to and from Los Angeles as duty time.

I hope these examples show how important it is to regulate flight attendant duty time and rest requirements. I believe I can speak for all the flight attendants at my carrier in urging you to pass H.R. 14. Passing this legislation is in the best interest of both flight attendant and passenger
safety.

I am pleased to have had this opportunity to testify before you and welcome any questions from the Members.

BEFORE THE SUBCOMMITTEE ON AVIATION

HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

FLIGHT ATTENDANT FATIGUE AND SAFETY

TESTIMONY OF

CHARLENE OSHIRO YAMAGATA, FLIGHT ATTENDANT FOR A NATIONAL AIRLINE

MARCH 13, 1991

Good Morning Mr. Chairman and Members of the Subcommittee.

Thank you for this opportunity to testify before you today. My name is Charlene Oshiro Yamagata. I have been a flight attendant for a national airline for 21 years. I have also served as the Association of Flight Attendants' Safety and Health Chairperson representing the flighttendants at my carrier for seven years. As Chairperson, I hear from flight attendants on a regular basis about excessively long duty days with little rest. I am pleased to be here today to discuss the problem of flight attendant duty time limitations since I believe it is a major safety concern at my carrier.

During my years of working as a flight attendant, I have seen tremendous changes in the airline industry, at my carrier and especially in the deteriorating working condition of the employees, particularly the flight attendants. Twenty-one years ago, I worked full-time as a flight attendant and attended graduate school full-time as well. I worked 11 1/2 hour days for the airline, 10-11 days a month and had 19-20 days off. This gave me plenty of time to rest between trips as well as study and attend classes. Flying was not that fatiguing when our work days were shorter and the rest more frequent. Since deregulation, the flying has become treacherous. Today, we are paid less, work harder and longer, and

enjoy less time off. Going to school would be difficult today, since flight attendants just do not have the time or energy.

On an average day, a flight attendant at my carrier will fly between 9-10 short flights. This means she/he will check the correct storage of carry-on bags 20 times a day, give announcements 30 times a day, check that seatbelts are fastened over 2000 times a day, take-off and land about 20 times a day, interact with about 1,350 customers, serve and clean-up 1,350 cartons of juice, coffee or cocktails, setup and breakdown the beverage service 20 times a day, count money and tidy up the airplane ten times -- all while finding the time to smile, be pleasant and helpful! If you think this is exhausting, it is!

Even these responsibilities, like preparing the cabin for take-off and landing, checking for oversized and improperly stowed carry-on bags and giving safety announcements are important safety related tasks. Now add these tasks to the other crucial safety responsibilities a flight attendant must perform and the job becomes momentous. If all we were responsible for was passing out pillows, then while 40 hours on duty would be exceptionally long, it would serve no safety consequence. However, flight attendants are safety professionals and passengers rely on us for leadership. We must be alert for over-sized and improperly stowed carry-on bags. We must react with split-second timing to provide an ailing

passenger with oxygen or perform CPR. We must be able to help an unaccompanied child secure her/his oxygen mask and calm their fear in an explosive decompression or be keenly aware of the smell of smoke and fight a fire before it rages uncontrollably. Flight attendants must constantly be aware of their surroundings. We must be alert for possible terrorists or hijackers. We must listen for the high pitched hiss which might turn into an explosive decompression or sense the shaking which might indicate a damaged tail. Our main concern is the passengers' safety. We are the employee who knows what to do when a plane lands in the middle of the ocean. We are the ones who will get the rafts out, inflate them, assist people into the rafts and care for those who may be injured in the process. There are countless safety duties which the fatigued body and mind must be on alert for. Like the air traffic controller or pilot, we cannot let our guard down for even a moment.

Flight attendants must be well-rested and alert to perform their job responsibilities optimally. Recently I spoke to a colleague who described the following trip. She worked from Ft.Lauderdale, Florida to Niagara Falls, New York and was then released from duty to go home. Two hours later, she was called to report back to the airport because the carrier was short the required number of flight attendants. She then flew from Niagara Falls to Ft. Lauderdale to Lincoln, Nebraska back to Ft. Lauderdale and then to Niagara Falls. She had worked four hours with a two hour rest period and then

another 14 hours. This was not the end of her day though. The next flight was also short of staff and since she was already at the airport, the company assigned her to do another round trip from Niagara Falls to Ft.Lauderdale to Lincoln to Ft. Lauderdale and then back to Niagara Falls. As the clock was hitting her 35th hour of continuous duty and her 12th landing, she sat in her jumpseat barely able to sit upright and thought, "I don't think I have enough energy to open this escape door. I think I am going to die with this plane if something happens." While this is an amazingly long duty day, it and other days just like it happen far too frequently to flight attendants.

If flight attendants are not intentionally scheduled for long days, our work days become longer due to mechanical delays. While a 12 hour work day with a 12 hour rest period followed by another 12 hour trip, is within the guidelines of our contract, the flight attendants are often subjected to longer duty days as a result of unanticipated delays. For example, a flight is delayed six hours before it even departs. This lengthens the actual duty day as well as reduces the rest period. The flight attendant, now with only six hours of rest, uses much of this time waiting for ground transportation, travelling to and from the airport, checking into the hotel, and eating. In the end, she/he will be lucky if she/he gets two hours of sleep out of the six hour rest period.

Reduced rest periods bring to my mind another story at my carrier

pertaining to a charter from Honolulu to Subic Bay, Philippines and back to Honolulu. Due to a delay, the Captain told the flight attendants they were not going to receive their nine hours of crew rest and would, in fact, only get five hours. It took almost three hours for the crew to clear customs and an hour by ground transportation to get to the company's arranged for military rooming quarters. That left two hours for rest. At the quarters, the five flight attendants and one pilot learned that there was only one room available and that they would all have to share that room. When they got to the room, they found one bed in the bedroom and no furniture in the living room. The captain took the bed and the flight attendants went without sleep. By the end of the return trip home, the flight attendants had worked 33 hours and 15 minutes without sleep.

At my carrier, we have a negotiated contract, which gives crew schedulers the parameters for our maximum on-duty day and how much rest we must receive afterwards. Unfortunately, in the real world, contracts can be broken and often are. The "needs of the service" always supersede what has been negotiated. Flight attendants, who are forced to work longer hours or rest less, have a number of undesirable recourses. The flight attendants can simply refuse to take the flight. Yet, if they protest, they are faced with harassment and discrimination by schedulers, suspension, intimidation, charges of insubordination or the threat of termination by management. The company can also "declare an

emergency" which means a flight attendant cannot refuse the flight. Or, when faced with a trip that stretches the contract's parameters, a flight attendant can file a grievance. A flight attendant who does file a grievance will most likely spend the next year of her/his life waiting for a decision. Meanwhile, the flight attendant has no recourse but to work the long hours. Day in and day out, the flight attendant must live with over zealous schedulers. When a victorious decision for the flight attendant finally comes down through the grievance process, the company may change its practice for awhile. The problem, however, is not permanently resolved as we have experienced management fall back into the same bad habits weeks after a decision. Thus, it becomes an endless process of filing grievances over and over again.

I am not here today to complain about my career choice. After 21 years, I obviously love my job. I am here to appeal to Congress to help set flight attendant duty time limits guidelines. My primary function on an airplane is safety. Filing a grievance is insignificant, if, during a long work period, I endanger the lives of the passengers because I fail to close a door properly or am too tired to notice a passenger who has stopped breathing. Safety is paramount.

The carriers may say that setting such regulations would cost too much money and cause too many changes in their schedules. Yet, I wonder, if the carriers are presently scheduling limited pilot work

hours and providing them with rest, how difficult could it be for them to do the same for flight attendants? If the companies can plan ahead to have pilot replacements available at airports, they can certainly plan ahead to have flight attendant replacements available too. The carriers' present inability to replace fatigued or sick flight attendants clearly shows the difference between those employees who have federally-mandated maximums and minimums and those who do not.

I would like to conclude my testimony by describing a trip, which I believe exemplifies why this country needs flight attendant duty and rest time regulations. A colleague recently worked a 33 and a half hour duty day and described the trip to me. She was supposed to leave Seattle, Washington at 4:14 pm but the flight was delayed until 3:30 am, as an aircraft part was being flown in from Vancouver, Canada. During this time, the crew boarded and deplaned the passengers twice. The flight attendants stayed on the plane for the entire 11 hours. They finally flew to Frankfurt, which is a 10 and a half hour flight. This crew had been on duty for 21 hours at that point, and while the pilots were replaced in Frankfurt, Germany the flight attendants traveled on. From Frankfurt, they worked to Zurich, Switzerland but the flight was so late that it had missed the landing curfew and was diverted to Basil, Switzerland. Arriving at midnight, the flight attendants were given a five hour break at a hotel, which allowed them to sleep for all of about three hours. At 6:00 am on the return trip

to Zurich, during take-off, there was a loud explosion and the take-off was aborted. The fatigued flight attendants froze. Only one of the flight attendants reacted quickly and assessed the situation. The other flight attendants were so tired that their reaction time was slowed at this critical moment. The plane returned to the gate and after it was determined that there was nothing wrong with the engines, they had just backfired, the flight continued to Zurich. By the end of the trip, the flight attendants had been on duty 33 and a half hours.

Flight attendants should not need to bite their lips to stay awake or need to drink the 10th cup of strong coffee to clear a foggy head. The issue here is safety - for the flight attendants and primarily for the passengers. We must have federal guidelines for our duty times and rest times.

Members of the Subcommittee, the next time a plane carrying your family members has a malfunction or prepares for an emergency landing, I hope that the flight attendants on board will be in the mental and physical condition to save lives. After all, it will be their leadership which the passengers will rely on and their voice commands to direct them to an opened door. For this reason, flight attendants need to be wide awake and alert.

I appeal to you to pass Congressman Mineta's legislation to regulate duty time and rest periods. Please support H.R. 14. I

would be happy to answer any questions you may have.

ADDITIONS TO THE RECORD

COALITION OF FLIGHT ATTENDANT UNIONS

AFA

APFA

IBT

IFFA

IUFA

TWU

UFA

FLIGHT ATTENDANT DUTY TIME BILL
FACT SHEET

Since 1952, Federal Rules Have Required Flight Attendants on Aircraft for Safety Reasons

- Evacuating passengers during a post-crash fire or into rafts in a water ditching.
- Detecting and extinguishing in-flight fires.
- Protecting passengers in explosive decompressions.
- Treating passengers with in-flight medical emergencies.
- Checking on-board emergency equipment.
- Monitoring aircraft for bombs and other security threats.

Flight Attendants Work Excessively Long Hours

- Many flight attendants are not unionized and do not have contractual limits on hours worked.
- In the 1985 Galaxy crash in Reno, NV, the non-union flight attendants had been on duty 18 hours and would have been on duty a total of 25 hours had they completed their trip.
- Many unionized flight attendants can be scheduled to fly 14-17 hours depending on the carriers, and if there are delays, can be on duty even longer.

U.S. Trails Foreign Countries in Issuing Flight Attendant Regulations

- Over a dozen foreign countries cap maximum number of hours flight attendants can work.

Fatigue Reduces Safety Performance

- FAA has long recognized that fatigue reduces safety by setting rules limiting hours that dispatchers, pilots and air traffic controllers (ATC) can work.
- Flight attendants report extreme fatigue when working 14 and 16 hour days with time-zone changes, and multiple take-offs and landings.
- Working as a flight attendant is a physically demanding job in a noisy, poorly ventilated, stressful environment unregulated by OSHA.
- Aircraft emergencies, such as heart attacks, in-flight fires and decompressions, happen with such speed that it is critical that the flight attendants be alert.

Flight Attendants Need Duty Time Limitations Now

- After awaiting rulemaking for almost five years, our petitions for duty time limitations were denied on the grounds that there was no evidence of flight attendant fatigue. Yet the FAA says that flight attendant alertness is important enough to justify random drug testing. Congress should put an end to the agency's inconsistent approach to flight attendant alertness.
- There is still no action though the FAA promised to issue an ANPRM by the summer of 1990 after it found many cases of flight attendant duty exceeding 20 hours in a data collection it completed in September 1989.

Safety Cannot Be Left for Negotiations

- In setting rules for pilots, dispatchers and ATC, the FAA recognized that aviation safety cannot be left to negotiations between unions and management, where safety can be bargained away. Moreover, thousands of U.S. flight attendants work at non-union airlines and have no safety protection.

Flight Attendants Urge Congress to Support Flight Attendant Duty Time Legislation - H.R. 14 and its companion bill in the Senate.

TRANSPORT WORKERS UNION-LOCAL 553 • INDEPENDENT UNION OF FLIGHT ATTENDANTS • UNION OF FLIGHT ATTENDANTS • INTERNATIONAL BROTHERHOOD OF TEAMSTERS • ASSOCIATION OF PROFESSIONAL FLIGHT ATTENDANTS • INDEPENDENT FEDERATION OF FLIGHT ATTENDANTS • ASSOCIATION OF FLIGHT ATTENDANTS

National Transportation Safety Board
Washington, D.C. 20594

Safety Information

Testimony of

National Transportation Safety Board

Presented to the

Aviation Subcommittee

Committee on Public Works and Transportation

House of Representatives

March 13, 1991

Mr. Chairman and Members of the Committee, the Safety Board is pleased to comment on H.R. 14 which would amend the Federal Aviation Act of 1958 to provide for the establishment of limitations on the duty time for flight attendants.

The Safety Board frequently has acknowledged the importance of flight attendants with regard to passenger safety and supports the principle underlying H.R. 14 to ensure that flight attendants have adequate rest. Flight attendants are included in the alcohol and drug use regulation because the Federal Aviation Administration (FAA) considers them as crewmembers who serve in safety-sensitive positions onboard aircraft and passenger safety would be derogated by their use of drugs or alcohol. Flight attendant fatigue also can derogate the safety of passengers. The positive and sometimes extra-ordinary actions of flight attendants who prevented passenger injuries or deaths following accidents have been addressed in numerous Safety Board investigation reports.

On October 9, 1985, the Safety Board responded to the FAA's Notice of Petition for Rulemaking (Docket 24397) which was received from the Association of Flight Attendants and the Joint Council of Flight Attendants Union relating to flight and duty time regulations. The Board urged the FAA to initiate rulemaking as soon as practical using the petitions as the basis for formulating flight attendant flight and duty times.

Although the Safety Board has not issued safety recommendations that relate to flight attendant flight and duty times, considerable research has been conducted on fatigue and its effects on human performance. To our

knowledge there have been no controlled studies of the effects of fatigue on flight attendant performance, but related research has been conducted on train crews, pilots, nurses, truckers, bus drivers, military personnel, and other shift workers. Data from these studies indicate that performance deterioration results from loss or disturbance of sleep, long duty hours, and changes in work/rest cycles.

On May 12, 1989, the Board recommended to the Secretary of the Department of Transportation (DOT) that action was needed across all transportation modes for research programs to better define the effects of fatigue upon human performance, to disseminate materials on work and rest cycles and proper health maintenance, and finally, to improve hours of service regulations to be consistent with the findings of the research programs. The Safety Board has also placed these recommendations on its "most wanted" list of recommendations that need action. These recommendations were prompted by several surface transportation accident investigations:

-- A train crew could not stay awake and alert because of sleep deprivation due to the fact that their work shifts and off-duty rest periods at home were unpredictable. Their freight train struck another train at Thompsontown, Pennsylvania, when they failed to comply with restrictive track signals. The engineers and brakemen of both trains were killed and the conductors on both trains sustained minor injuries. The damage to the trains was over $6 million.

-- The driver of a tractor-semitrailer that struck the rear of a school bus suffered from loss of sleep caused by chronic fatigue brought about by excessive duty time and a pattern of prolonged irregular duty hours. The accident killed 2 and injured 25 of the 32 passengers on the bus. The truck driver had been on duty more than 88 hours during the 8 consecutive days prior to the accident.

The Board also faulted the trucking company for failing to properly monitor the drivers' activities to prevent excessive hours of service.

-- The master of a passenger vessel/car carrier ran the vessel aground off the Coast of Mona Island, Puerto Rico. The 143 passengers and 72 crewmembers were disembarked using the lifeboats. The Safety Board determined that the master suffered from both chronic and acute fatigue. During the 12 months preceding the grounding he had not had a day off. The vessel's schedule during the week preceding the grounding allowed the master only about 3 hours free time each day. Insomnia and daily responsibilities had deprived the master of sleep for about 42 hours when his vessel grounded.

These accidents clearly illustrate far-reaching detrimental and often fatal effects of poor scheduling of duty and rest times of operational personnel in various modes of transportation. The Safety Board has found that most employees and supervisors in the transportation industrys do not receive training on the problems associated with work and rest schedules and the effects of such schedules on safety and performance.

In conclusion, the Safety Board has no accident investigative information to demonstrate that flight attendant duty time has been a factor in flight attendant performance. However, because of our experience with the effects of fatigue on human performance in other transportation modes, we believe flight attendants, like all those in safety-sensitive positions, should not be subject to excessive work schedules.

Mr. Chairman, that concludes the Safety Board's testimony. I have attached for the record safety recommendations A-89-1 through -3, and other related material.

National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date May 12, 1989

In reply refer to: I-89-1 through -3

Honorable Samuel K. Skinner
Secretary
Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

About 7:54 a.m., eastern standard time, on January 14, 1988, westbound Consolidated Rail Corporation (Conrail) "trailer van" freight train TV-61 collided with eastbound Conrail freight train UBT-506 near Control Point Thompson, at Thompsontown, Pennsylvania. The engineers and brakemen on both trains were fatally injured. The conductors on both trains received minor injuries. Damage to the trains was estimated at $6,015,000.

The National Transportation Safety Board determined that the probable cause of this accident was the sleep-deprived condition of the engineer and other crewmembers of train UBT-506, which resulted in their inability to stay awake and alert, and their consequent failure to comply with restrictive signals. Contributing to the failure of the crewmembers were their unpredictable work and rest cycles, their voluntary lack of proper rest before going on duty, and the inadequate alertness and acknowledging devices of the locomotive safety backup systems.

This accident illustrates several aspects of current railroad operations that can adversely affect train crews' performance of their duties and, ultimately, the safety of rail transportation. Specifically, the Safety Board found in this case that the engineer and brakeman of UBT-506 probably were suffering chronic sleep deprivation because their work shifts and off-duty periods at home were unpredictable and irregular. As a result, the crewmembers customarily participated in the normal work and living routines of their families, sleeping during conventional night hours. They did not attempt to get meaningful sleep before anticipated calls to work late in the day or at night, but would try to get by without adequate sleep until their next off-duty period. In this instance, none of the crewmembers of train UBT-506 had more than 2 hours of restful sleep during the 22-24 hours preceding the accident. The Safety Board concluded that the crewmembers' sleep-deprived condition was compounded by the monotonous environment of the locomotive cab and, possibly, by their failure to eat a meal for at least 13 hours before the accident. Finally, the Safety Board found that the UBT-506 engineer was able to prevent the automatic train stop (ATS) device from applying the brakes by simply depressing and releasing the acknowledging pedal in his sleep; the ATS did not incorporate an acknowledging feature that required alertness.

The Safety Board believes that the work and rest cycles and the behaviors outlined above may have been typical not only of this crew but of other train crews elsewhere on the Conrail system and on other railroads. The changing nature of railroad operations and competitive factors have materially increased the relative number of train crewmembers who must work irregular and unpredictable shifts on a long-term basis. Lacking proper training and education in the physiology of fatigue, many may allow themselves to become chronically deprived of sleep, and develop physiological problems that could adversely affect their performance and the safety of train operations. Other transportation industry operators are exposed to shift work, but the work and rest cycles of railroad extra-board and pool traincrews are often more irregular and unpredictable.

The Safety Board believes that railroad management and unions serving railroad operations have failed to adequately consider the effects of unpredictable work schedules and the relaxation of medical standards and procedures. Moreover, the Safety Board believes cooperative efforts are needed to reduce the element of unpredictability in work scheduling and to train and educate employees and their families about proper regimens of health, diet, and rest. As a result of its investigation of the Thompsontown accident, the Safety Board issued a series of recommendations on these safety issues to Conrail, the Brotherhood of Locomotive Engineers, and the United Transportation Union.

The human performance issues involved in the Thompsontown accident and similar train accidents investigated by the Safety Board in recent years are not unique to the railroad industry. They have frequently appeared in accidents in other transportation modes as well.

Highway

Some of the clearest instances of fatigue-related problems are seen in the Safety Board's investigations of major highway accidents. For example, about 4:15 a.m. on July 14, 1986, an intercity bus operated by Trailways Lines, Inc., collided with a truck operated by Rising Fast Trucking Company on Interstate Highway 40 near Brinkley, Arkansas. The busdriver and 27 bus passengers sustained injuries ranging in severity from minor to serious; the truckdriver and his codriver were not injured. The truckdriver had only a 2-hour nap in the 21 hours before the accident. The Safety Board concluded that the combined effects of fatigue due to sleep deprivation, monotony, and vulnerability to lapses in attention at that hour of day combined to decrease the truckdriver's vigilance, adversely affected his judgment, and contributed to his commission of several errors before the collision.

On April 29, 1985, a tractor-semitrailer collided with the rear end of a schoolbus near Tuba City, Arizona. Of the 32 schoolbus passengers, 2 were fatally injured, 26 sustained serious to minor injuries, and 4 were uninjured. The truckdriver and the schoolbus driver received minor injuries. The Safety Board determined that the probable cause of this accident was the truckdriver's chronic fatigue, which adversely affected his ability to avoid

the collision. His chronic fatigue developed from a loss of sleep due to a combination of excessive duty time and a pattern of prolonged irregular duty time. Contributing to the accident was the failure of the truck company to properly monitor the truckdriver's activities to prevent excessive hours of service.

The truckdriver was found to have kept two sets of logs--one for the company and one for himself--with conflicting entries for the time worked. Fuel receipts conflicted with entries in the driver's logs. The truckdriver said he had slept poorly two nights before the accident due to a cough. The night before the accident he had slept on the floor of a motel room shared with other truckdrivers. After sleeping from around 10 p.m. until 3:30 a.m., he arose, prepared his truck, drove to a ranch, and loaded cattle into the truck trailer. Following breakfast, he left Tonapah, Arizona, destined for Medicine Bow, Wyoming. The accident occurred about 3:15 P.M.

According to the trucking company, the driver had been on duty a total of 88 1/4 hours during the 8 consecutive days before the accident. He was in violation of the Federal rule restricting duty to a maximum of 70 hours in 8 days. He was also in violation of the 10- or 15-hour per day rules, or both, on April 23, 25, 26, 27, and 28. His consumption of a large quantity of sweets several hours before the accident, with the resultant initial elevation in the level of blood sugar, may have led to a rapid depletion of blood sugar and further fatigue.

The Safety Board has issued several safety recommendations related to fatigue, work duty time and its limitations, and record keeping. Recommendations included asking the Office of Motor Carrier Safety (OMCS) to issue "On Guard Notices" warning drivers of the problems of fatigue, and recommending that the OMCS find methods and means to prevent or minimize dozing at the wheel by drivers of carriers in interstate commerce. Based on OMCS's response to this latter recommendation, the Safety Board classified it as "closed, unacceptable action"; but addressee action on the remainder of these recommendations was considered acceptable.

Clearly, the pressure of competition and economics are pervasive factors that tend to complicate and exacerbate the problems of excessive duty time and prolonged irregular duty times in commercial vehicle operations. Therefore, any program of remedial action must address this fundamental reality. It is also apparent to the Safety Board that there are serious deficiencies in the industry's understanding and application of knowledge about sleep, circadian factors, and fatigue as they affect driver performance on the Nation's highways. Additionally, public policy has some serious shortcomings, as reflected in the substance and the lack of enforcement of regulations governing commercial driver duty and rest. The Safety Board believes that these deficiencies in knowledge, policy, and practice warrant an immediate and concerted program of remedial action by the U.S. Department of Transportation (DOT).

Marine

The Safety Board has investigated a number of marine accidents in which crewmember fatigue or sleep deprivation was involved. These accidents, like those cited from other transportation modes, illustrate an inadequate

recognition of the significance and extent of the fatigue problem in the transportation industry.

At 12:20 a.m. on February 15, 1985, a 330-foot Panamanian-Flag passenger/car carrier, the M/V A. REGINA, ran aground on the southeast coast of Mona Island, Puerto Rico. After unsuccessful attempts to refloat the REGINA, the 72 crewmembers and 143 passengers were landed by the vessel's lifeboats and liferafts on Mona Island and subsequently flown back to Mayaguez. One crewmember was injured when leaving the vessel. The stranded vessel, valued at $5 million, was considered a total loss.

The Safety Board determined that the probable cause of the grounding was the failure of the master to monitor the vessel's progress along the charted course line by plotting navigation fixes so as to detect the vessel's set and drift. Contributing to the accident was the master's failure to make a leeway steering allowance for the effects of wind, sea, and current when plotting a course line close to the island, his assuming a watch while on medication and in a fatigued physical condition, and his failure to maintain an adequate lookout.

Evidence indicated that the master was suffering from both chronic and acute fatigue. He had not had a day off during the preceding 12 months. His daily workload varied, depending on whether a trip was made or the vessel remained in port. During the week of the accident, the company had instituted daily roundtrips between Puerto Rico and the Dominican Republic. This schedule allowed the master only about 3 hours to himself each day, in addition to a typical allowance of 7-8 hours for sleep. Insomnia and responsibilities of operation had deprived the master of sleep for a period of about 42 hours when the grounding occurred.

About noon on April 21, 1987, the USS RICHARD L. PAGE collided with the fishing vessel CHICKADEE which was under tow by another fishing vessel. Six feet of the bow of the CHICKADEE was severed and it immediately started taking on water. All three crewmembers on the CHICKADEE abandoned the vessel just before it capsized and sank. Crewmembers were rescued shortly afterward, and no one was injured. The PAGE sustained only minor damage. The CHICKADEE was a total loss. Total damage was estimated at $112,000.

Although visibility was limited at the time of the collision, the captain of the PAGE, a guided-missile frigate, decided to conduct a full power trial to test maximum speed of the frigate. Neither the captain of the PAGE nor of the CHICKADEE sounded fog signals. The officer of the deck (OOD) on the PAGE was advised of intermittent contacts on the radarscope, but because he could not confirm the contact, decided it was not an actual vessel and thus did not report the contact to the captain.

The Safety Board attributed the OOD's behavior the day of the accident partly to his long working hours and disrupted sleep pattern during the several days before the accident. The Board also expressed concern regarding the nature of military operations, which foster almost stoic acceptance on the part of military leaders and their subordinates of an arduous regimen that would be considered unacceptable in most nonmilitary environments.

At 9:14 A.M. on July 19, 1987, two passenger/car ferries collided near Orient Point, Long Island, New York, during dense fog. The M/V NORTH STAR, a 158-foot ferry, was southbound with 21 passengers on board; the M/V CAPE HENLOPEN, a 308-foot ferry, was northbound with approximately 250 passengers on board. Each ferry was being conned by its master who identified the other vessel on radar and established a meeting agreement by radiotelephone. Both vessels were damaged substantially in the collision but were sufficiently seaworthy to continue on their respective routes. Seventeen passengers and two crewmembers aboard the NORTH STAR were injured; two passengers aboard the CAPE HENLOPEN reported they were injured.

The Safety Board determined that the probable cause of the collision was the failure of the masters of both ferries, while approaching each other in close quarters in reduced visibility, to reduce speed in accordance with the Inland Navigation Rules to a minimum at which courses could be maintained and to specify in their meeting agreement the meeting site and clearance to be maintained.

Investigation disclosed that although the master of the CAPE HENLOPEN, by personal preference, had worked 16 to 17 hours per day during the 4 days before the collision, it could not be established that fatigue played a role in his performance on the morning of the collision. Nevertheless, the Safety Board expressed its concern that current Coast Guard regulations do not specify maximum allowable worktime for crewmembers on ferry vessels. Accordingly, the Board recommended that the Coast Guard establish limitations on watch and duty time for crewmembers on board ferries and other inspected passenger vessels. The Safety Board has classified this recommendation as "open, unacceptable action" pending further response by the Coast Guard.

Aviation

Limitations on flight and duty time for airline pilots generally are more stringent than corresponding limitations for vehicle operators in surface modes of transportation. Fortunately, no recent airline accidents have been attributed to fatigue among flightcrews. Nevertheless, anecdotal and media accounts of pilot complaints about fatigue and sleepiness in the cockpit warrant concern, particularly on extended flights that cross multiple time zones. The Aviation Safety Reporting System of the National Aeronautics and Space Administration continues to receive monthly reports from long-haul flightcrews describing how fatigue and sleep loss have contributed to major operational errors.

On February 19, 1985, China Airlines flight 006, a Boeing 747 en route to Los Angeles, California from Taipei, Taiwan, suffered an inflight upset. The flight from Taipei to 300 nautical miles northwest of San Francisco was uneventful and the airplane was flying at 41,000 feet mean sea level when the No. 4 engine lost power. During the attempt to recover and restore normal power on the engine, the airplane rolled to the right, nosed over, and entered an uncontrolled descent. The captain was unable to restore the airplane to stable flight until it had descended to 9,500 feet and had been subjected to more than 5 G's in the process. After the captain stabilized the airplane, he elected to divert to San Francisco International Airport, where a safe landing was made. The airplane suffered major structural damage during the accident, and two passengers were seriously injured.

The Safety Board determined that the probable cause of this accident was the captain's preoccupation with an inflight malfunction and his failure to properly monitor the airplane's flight instruments, which resulted in his losing control of the airplane. Contributing to the accident was the captain's over-reliance on the autopilot after the loss of thrust on the No. 4 engine.

Flight 006 had departed Taipei at 12:22 A.M. Pacific standard time (4:22 p.m. Taipei local time) and had been airborne 9 hours 46 minutes when the accident occurred. Because of the scheduled duration of the flight (11 hours), an augmented flightcrew was on board, which included an additional fully qualified captain and flight engineer. At the time of the accident, the primary flightcrew members were on duty. They had been on duty during the takeoff, climb, and initial part of the flight, had been afforded a rest period, and had returned to duty about 2 hours before the accident.

Although preoccupation and over-reliance on the autopilot were cited as significant factors in the accident, the Safety Board also noted that the flight had been airborne nearly 10 hours, that it had traversed several time zones, and that the upset occurred about 2:14 a.m. Taiwan local time--about 4-5 hours after the captain had been accustomed to going to sleep. Thus, his ability to obtain, assimilate, and analyze data presented to him could have been impaired by the effects of boredom, monotony, and fatigue. However, the Safety Board was unable to establish conclusively that the captain's performance was impaired by these factors.

On December 12, 1985, Arrow Air Flight MF1285R, a U.S. registered DC-8-63, crashed and burned approximately one-half mile off the departure end of runway 22 at Gander, Newfoundland. All 248 passengers--U.S. military troops--and eight crewmembers sustained fatal injuries. The Canadian Aviation Safety Board (CASB), which investigated the accident, was unable to determine the exact sequence of events that led to the accident. Although the CASB found no basis to indicate that the crew's performance on the accident flight could have been affected by fatigue, its investigation disclosed that if the flight had successfully continued to its Fort Campbell, Kentucky, destination, the crew would have remained on duty to ferry the aircraft to Oakland, California. The CASB estimated that, at the completion of that subsequent flight, the crew would have accumulated about 15 flight hours in the 24 hours that began with their departure from Cologne, West Germany, and the crew's duty day would have approached 20 hours. However, because the ferry flight would have been flown under 14 CFR Part 91 flight rules, which do not include any flight time limitations or minimum crew rest requirements, it could have been accomplished within the provisions of applicable Federal Aviation Regulations.

In its report of this accident, the CASB stated it believes that flight crews of air carrier aircraft "...require the same degree of vigilance, judgement, and ability to react whether they are conducting a revenue-generating or a non-revenue operation." The National Transportation Safety Board agrees with the CASB on this issue and believes this example illustrates

one of the inadequacies of current Federal Aviation Regulations with regard to flight time, duty time, and crew rest provisions. Moreover, the Board believes the example indicates a need to review and upgrade the rules to assure that they incorporate the latest research on fatigue and sleep matters.

The major transportation accidents outlined above raise serious concerns about the far-reaching effects of fatigue, sleepiness, sleep disorders, and circadian factors in transportation system safety. These and other investigative experiences indicate that poor scheduling of work and rest time continues to affect the performance of operating personnel in virtually all modes of transportation. Safety Board experience also indicates that most employees and supervisors in the transportation industry do not receive training on the problems associated with work and rest schedules and the effects such schedules have on safety and performance. Additionally, proper living habits, including attention to exercise, diet, and rest, are important to good health. However, many transportation operating personnel may not adequately appreciate the importance of these habits in relationship to their fitness for duty and their susceptibility to fatigue in the face of their irregular and often unpredictable work/rest patterns. Therefore, the Safety Board believes there is a need to develop and disseminate educational materials that will assist transportation employees in adapting living habits appropriate to their work/rest patterns.

Furthermore, it appears that, with minor exceptions, neither management nor the labor segments of the transportation industry properly considers the adverse effects of irregular and unpredictable cycles of work and rest on its vehicle-operating personnel. Although some private research has been conducted on this safety issue,[1] the Safety Board is unaware of any systematic activity by the DOT to address the safety concerns of inadequate work and rest scheduling in any of the transportation modes.

Since 1972, the Safety Board has issued about 39 safety recommendations to transportation modal administrations, operators, and associations concerning fatigue, duty time, and hours of service. Collectively, these recommendations addressed most aspects of the fatigue and fitness-for-duty issues, but they constitute uncoordinated and piecemeal efforts directed to various government and industry segments of the transportation community. The Safety Board is aware of the March 1989 DOT report entitled "Transportation-Related Sleep Research," which was prepared in response to a request by the U.S. Senate Committee on Appropriations, and which describes current Departmental activities in this field. This report provides an overview of current diverse

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1 Moore, Ede, Sulzman and Fuller: The Clocks That Time Us, Harvard University Press, 1982. Akerstedt, Torswell, and Gillberg: "Sleepiness and Shift Work; Field Studies," Sleep 5:S95-S106, New York, Raven Press, 1982. Johnson and Naitoh: "The Operational Consequences of Sleep Deprivation and Sleep Deficit," AGARDOGRAPH No. 193, June 1974. "Biological Clocks and Shift Work Scheduling," Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology, House of Representatives, Ninety-Eighth Congress, March 23, 1983.

activities by various Departmental administrations regarding the role of fatigue, sleep disorders, and sleepiness in their respective modes. However, the Board believes a review of the report also indicates a need for more overall planning, direction, and control of these activities to assure that they are administered as a coordinated, effective program that will provide the best possible safety benefits for the entire transportation community.

Based on its experience in accident investigation, the Safety Board believes it is time for an aggressive Federal program to address the problems of fatigue and sleep issues in transportation safety. Such a program should include a coordinated research effort, an extensive educational effort directed toward all segments of the transportation industry, and a systematic review and improvement of regulations governing hours of service across all transportation modes.

Therefore, the National Transportation Safety Board recommends that the U.S. Department of Transportation:

> Expedite a coordinated research program on the effects of fatigue, sleepiness, sleep disorders, and circadian factors on transportation system safety. (Class II, Priority Action) (I-89-1)
>
> Develop and disseminate educational material for transportation industry personnel and management regarding shift work; work and rest schedules; and proper regimens of health, diet, and rest. (Class II, Priority Action) (I-89-2)
>
> Review and upgrade regulations governing hours of service for all transportation modes to assure that they are consistent and that they incorporate the results of the latest research on fatigue and sleep issues. (Class III, Longer-Term Action) (I-89-3)

KOLSTAD, Acting Chairman, and BURNETT, LAUBER, NALL, and DICKINSON, Members, concurred in these recommendations.

By: James L. Kolstad
Acting Chairman

National Transportation Safety Board
Washington, D.C. 20594

Office of the Chairman

October 9, 1985

Federal Aviation Administration
Office of the Chief Counsel
Room 916
800 Independence Ave., S.W.
Washington, D.C. 20591

Attention: Rules Docket (AGC-204) Petition Docket No. 24397

Dear Sir:

This is in response to the Federal Aviation Administration's (FAA) Notice of Petitions for Rulemaking received from the Association of Flight Attendants (AFA) and the Joint Council of Flight Attendants (CFAU) relating to flight and duty time regulations, Petition Docket No. 24397, which was published at 50 FR 25252 on June 18, 1985.

The Safety Board supports the principle underlying these petitions to provide flight and duty time limitations for flight attendants so as to ensure that they have adequate rest.

Considerable research has been conducted on fatigue and its effects on human performance. Although, to our knowledge there have been no controlled studies of the effects of fatigue on flight attendant performance, related research has been conducted on train crews, pilots, nurses, truckers, bus drivers, military personnel, and shift workers. Data from these studies indicate that performance deterioration results from loss or disturbance of sleep, long duty hours, and changes in work/rest cycles

The FAA has acknowledged the importance of the flight attendant in passenger safety in its regulations for flight attendant training and by including the flight attendants in its new regulation on alcohol and drug use (14 CFR 91.11). According to the FAA, the flight attendants were included in this new rule because "as crewmembers" their use of drugs or alcohol would be detrimental to passenger safety. The Safety Board believes that flight attendant fatigue also can be detrimental to passenger safety.

The Safety Board's recent investigation of the Galaxy Airlines L-188 accident in Reno, Nevada, on January 21, 1985, disclosed flight attendant scheduling practices that could be detrimental to safety. At the time of the accident two of the flight attendants (the minimum number required) had been on duty for 18 hours and 39 minutes. If these flight attendants had reached their scheduled destination, their duty time would have been in excess of 25

hours. Galaxy flight attendant rest provisions were determined solely on the basis of aircraft ground time. The attendants' two week schedule included all flights of the aircraft during that period. Lack of regulation permits this type of scheduling. The Safety Board is concerned that schedules such as these could impair the flight attendants' ability to perform the physical and mental tasks required in both unexpected emergencies and in emergencies which include time to prepare the passengers and cabin.

The AFA and the CFAU have presented detailed information in their petitions and have provided a basis on which the FAA can begin its rulemaking action. The Safety Board urges the FAA to initiate rulemaking on this important safety issue as soon as practicable.

Respectfully yours,

ORIGINAL SIGNED BY
JIM BURNETT

Jim Burnett
Chairman

Testimony before the
National Commission on Sleep Disorders Research

at a Public Meeting in the

Rayburn House Office Building
Washington, D.C.

September 25, 1990

by

James W. Danaher
Chief, Human Performance Division
National Transportation Safety Board
Washington, D.C. 20594

Good morning ladies and gentlemen. I am Jim Danaher, Chief of the Human Performance Division, at the National Transportation Safety Board. As you may know, the Safety Board is an independent federal accident investigation agency. The Board's mission is to determine the "probable cause" of transportation accidents and to formulate safety recommendations to improve transportation safety. I am pleased to participate in this very important meeting to address sleep-related problems.

In recent years the Safety Board has investigated a number of major transportation accidents in which the effects of fatigue, sleepiness, sleep disorders and circadian factors contributed to the accidents. These and other investigative experiences indicate that poor scheduling of work and rest time continues to adversely affect the performance of operating personnel in virtually all modes of transportation. This experience also indicates that most employees and supervisors in the transportation industry do not receive training on the problems associated with work and rest schedules, and the effects such schedules have on performance and safety. Moreover, it appears that, with minor exceptions, neither management nor labor segments of the transportation industry properly considers the adverse effects of irregular and unpredictable cycles of work and rest on its vehicle-operating personnel.

Some of the clearest instances of fatigue-related problems are seen in the Safety Board's investigation of major highway accidents. A recently-completed, year-long Safety Board study of 182 fatal heavy truck accidents found that driver impairment due to fatigue was the most frequently cited single cause or factor (31 percent) in the accidents investigated. Additionally, one third of the fatigued drivers also were impaired by alcohol and/or drugs. In its study the Board said, "Some truck drivers apparently do not realize that fatigue is aggravated after the initial effects of stimulants. Sleep deprivation becomes a deficit that drugs cannot overcome. Further, depressants, such as alcohol, aggravate fatigue and reduce the initial effect of stimulants...' [T]he only way to repay the 'deficit' is to sleep.'" The Board recommended to the nation's major trucking and shipping associations that they encourage their members to participate in education

programs regarding scheduling and its impact on driver fatigue, as well as the interaction of alcohol/drugs and fatigue.

The railroad industry also has had its share of accidents that the Safety Board has determined to involve fatigue. The collision of two Conrail freight trains near Thompsontown, Pennsylvania, in January 1988 is a representative example of how fatigue and irregular work schedules played a causal role. At 7:54 in the morning, a westbound Conrail freight train collided with another eastbound Conrail train, fatally injuring the engineers and brakemen on both trains, causing minor injuries to both conductors, and damage to the trains estimated at more than $6 million dollars.

The Safety Board determined that the probable cause of this accident was the sleep deprived condition of the engineer and other crewmembers of the eastbound train, which resulted in their inability to stay awake and alert, and their consequent failure to comply with restrictive signals. Contributing to the failure of the crewmembers were their unpredictable work and rest cycles, their voluntary lack of proper rest before going on duty, and the inadequate alertness and acknowledging devices of the locomotive safety backup systems.

This accident illustrates several aspects of current railroad operations that can adversely affect train crews' performance of their duties and, ultimately, the safety of rail transportation. Specifically, the Safety Board found in this case that the engineer and brakeman of the eastbound train probably were suffering chronic sleep deprivation because their work shifts and off-duty periods at home were unpredictable and irregular. As a result, the crewmembers customarily participated in the normal work and living routines of their families, sleeping during conventional night hours. They did not attempt to get meaningful sleep before anticipated calls to work late in the day or at night, but would try to get by without adequate sleep until their next off-duty period. In this instance, none of the crewmembers of the errant train had more than 2 hours of restful sleep during the 22-24 hours preceding the accident. The Safety Board concluded that the crewmembers' sleep-deprived condition was compounded by the monotonous environment of the locomotive cab and, possibly, by their failure to eat a meal for at least 13 hours before the accident. Finally, the Safety Board found that the engineer of the errant train was able to prevent the automatic train stop (ATS) device from applying the brakes by simply depressing and releasing the acknowledging pedal in his sleep; the device did not incorporate an acknowledging feature that required alertness.

Last year's notorious grounding of the EXXON VALDEZ also illustrates the role of fatigue in marine operations. Although the Safety Board's recently-adopted report of that accident cited the master of the tanker in its probable cause statement for failing to provide "a proper navigation watch" around an ice floe, it also determined that the third mate who assumed the watch was fatigued at the time of the grounding and overburdened as a result of an excessive workload.

In safety recommendations to the U.S. Coast Guard, the Exxon Shipping Company, and other shipping companies, the Safety Board advocated

improvements in regulations, policies, and procedures concerning vessel manning levels, work hours, and off-duty time for rest.

Based on its experience in accident investigation, the Safety Board believes it is time for an aggressive Federal program to address the problems of fatigue and sleep issues in transportation safety. Such a program should include a coordinated research effort, an extensive educational effort directed toward all segments of the transportation industry, and a systematic review and improvement of regulations governing hours of service across all transportation modes. On May 12, 1989 the Safety Board issued three safety recommendations to the Department of Transportation formally advocating the implementation of such a program (Recommendations I-89-1 through 3). In reply to these recommendations the Secretary of Transportation has indicated his intent to emphasize these issues in the recently-issued National Transportation Policy, and to include the various modal administrations in a concerted effort directed at the fatigue problems in transportation. I have provided copies of these recommendations for the Commission's information.

The Safety Board has taken a strong stand in advocating an aggressive and coordinated research effort focused on fatigue and sleep issues in transportation safety. Many of us at the Safety Board, most closely concerned with these issues, are particularly enthusiastic about the creation of the National Commission. We wish you every success in your much-needed and very worthwhile mission! Thank you.

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